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MANUAL
FOR
ANALYZING AND SELECTING TEXTBOOKS

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Books by John Addison Clement

CURRICULUM MAKING IN SECONDARY SCHOOLS
PRINCIPLES AND PRACTICES OF SECONDARY EDUCATION
and co-author with J. H. Clement
COOPERATIVE SUPERVISION IN GRADES SEVEN TO TWELVE

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MANUAL
FOR
Analyzing and Selecting Textbooks

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CHAPTER I

The Purpose of this Manual

The chief purpose of this manual is to serve as a guide to superintendents, principals, supervisors, teachers and others in the analysis, appraisal and selection of textbooks. In recent years, self-appointed groups have made a number of unfavorable reports concerning textbooks used in the schools, especially in the field of social studies. It seems quite desirable for any group, school or non-school, to have in mind certain minimum items and criteria when examining textbooks and passing judgment on the same.

This manual contains certain items and criteria which are felt to be consequential whenever analyzing and appraising and selecting textbooks. Chapters II and III characterize and explain, at some length, items which are felt to be common to any and all textbooks used in elementary and secondary schools. The purpose of the following two chapters is to enable all persons to be clear about the items used in the general analysis and general appraisal outlines. Usually the explanation of such items has not accompanied published check lists, or outlines, or score sheets to be used in judging the worth of textbooks. It is recommended, therefore, that Chapters II and III of this manual be carefully read and re-read before attempting to use the general analysis and appraisal outline sheets submitted in detail in Chapter IV.

The general analysis and appraisal outlines for use in the examination of textbooks in all fields are submitted in Chapter IV of this manual. It is desirable to use one copy of these general outlines or score sheets, in the instance of each textbook analyzed. These outlines or score sheets should be placed in the hands of all individuals who examine textbooks, and will serve as guides. Separate copies will be published by the Garrard Press, Champaign, Illinois, and may be ordered in different-sized packages from them for individual use by respective examiners.

This manual represents a companion book of a larger volume to be published later on by the present writer, and its title will be, "The Use of Textbooks and Other Materials of Instruction." This larger volume will consist of six main parts, namely: The Need for a Philosophy of All of the Offerings Given in the Schools; Problems Common to Textbooks and Other Curriculum Offerings in the Schools; Values and Uses of Textbooks and of Other Comprehensive Materials of Instruction; The Historical Development of Textbooks Used in Elementary and Secondary Schools Previous to and During the Nineteenth and Twentieth Centuries; Principles and Plans Relating to the Adoption of Textbooks; and Suggested Additional Intensive Studies and Worth While School Offerings. This total forthcoming larger volume will consist of twenty-four chapters under the above-named six large divisions. Numerous corresponding sub-divisions will also be discussed.

Since textbooks will be used in the majority of the private and public schools for many years to come, if not permanently, it seems clear that they should be examined with the greatest care possible before adoption. It is believed that the general analysis and appraisal outlines, or score sheets, presented in Chapter IV of this manual will be found to be very helpful to all persons who are responsible for selecting textbooks. It is suggested, therefore, that the general analysis and appraisal outlines represent the minimum items to be considered. Then, in addition to the use of the general outlines, it will frequently be found profitable to supplement these through the additional use of differentiated or special outlines, such, for example, as are suggested in Chapters V and VI of this manual.

In the larger forthcoming volume it has been suggested that textbooks have certain values that ought not to be overlooked. It has also been contended that most, if not all, of the criteria that can be used for judging the worth of textbooks can also be used in judging the worth of other materials of instruction.

CHAPTER II

Common Items for Use in Analyzing all Textbooks

1. **The chief purposes of this chapter.** One of the purposes of this chapter is to point out in some detail the nature of certain common items that can be used, with profit, whenever attempting to analyze elementary and secondary school textbooks in any subject field. Another purpose is to indicate reasons why such an outline should be used by the teaching staff and by others, whenever an attempt is made to *analyze* textbooks. No effort is made herein to justify, in any great detail, an outline consisting of common rather than of differentiated or special items, applicable to school textbooks as a whole. It seems pertinent, however, to suggest briefly that it is important for the teaching staff as a whole and for others, to have a common background of approach in making textbook analyses in the different subject fields. Such a means, it is believed, is afforded through the use of an outline of similar items pertaining to all of the different subject groups taught. Ultimately, it is desirable and necessary, of course, to supplement these common items with somewhat more differentiated aspects, pertaining to the different subject groups, thereby including those elements that are peculiar to the respective fields of subject matter taught in the schools. Another phase usually overlooked by many writers is the characterization and explanation of the items used in an analysis outline or check list.

2. **Reason for the use of the phrase, analysis, appraisal or evaluation, and selection of textbooks.** The sequential order of the phraseology—*analysis, appraisal, and adoption or selection*—has educational significance of large import. Peculiarly enough, and in certain instances, unfortunately, teachers, upon coming to their respective positions, find that their textbooks to be used have already been selected for them

in advance of their arrival. In such instances, instructors are expected, as they use these textbooks, to become familiar with the subject matter included. This practice, for some teachers, becomes a fragmentary procedure from day to day, or from week to week, or from semester to semester, as the school year progresses. Fortunately, now and then, a small fraction of the total teaching body will attempt to *analyze* carefully the content of the textbooks that have been adopted. A relatively small percentage of the teaching corps will, however, make any effort to *evaluate* the content of the subject matter to be taught. It is evident that the actual order of procedure is often the reverse of that proposed in the phraseology used above. In other words, elementary and secondary school textbooks very often have been selected and adopted, with the possible accompanying vague hope that they will eventually be analyzed and evaluated by the more competent members of the administrative and teaching staff, at some time, after the books have been put into use. It can be justifiably assumed, of course, that persons who are interested in, and also engaged in, research work anywhere may make analyses and evaluations with profit, apart from the necessity or obligation of selecting and adopting these same textbooks. On the other hand, it is questionable whether it is ever justifiable for practical school men or women to select and adopt textbooks, without first having made a very scrutinizing analysis and well-ripened judgment of them.

In the next place, therefore, it is herein assumed that analysis should wherever possible precede evaluation, and, furthermore, that both analysis and evaluation should precede the selection or adoption of textbooks in the schools. What the exact manner of this analysis and appraisal shall be is a complicated problem to which too little attention frequently has been given by school men and women. The following realistic incident is illustrative of what has, no doubt, often happened throughout the country, in the United States as a whole. In great haste, and in almost breathless condition, a teacher at one time in a secondary school rushed up to the office of Principal Blank A, on the opening day of school, and

inquired, "What textbook shall we use in my course for this year?" "We shall use," said the Principal, "the textbook written by Mr. Blank B, which was adopted during the last week of August." "And I do hope I shall like it very much and that the pupils also will enjoy it," said the inquiring instructor. "Yes," responded Principal Blank A, and added, "By the way, will you please let me know, at the end of this school year, just what you think of the textbook?" This somewhat usual example will, perhaps, furnish a point of departure for some of the ensuing discussions. *It is appropriate to make the statement here that it is important to make an analysis and evaluation of all materials of instruction used in the program of studies, whether found within or outside of textbooks.* Furthermore, many, if not all, of the criteria used for judging textbooks as such may be used likewise in evaluating the materials of instruction not found within textbooks. While this present discussion is centered strongly upon the textbook materials of instruction, it is maintained also that it is essential to scrutinize just as carefully as possible all of the published and unpublished courses of study, organized and offered within the schools of the United States.

3. Interrelationship between analysis and evaluation of textbooks. It is possible to analyze textbook materials without, necessarily, at the same time, evaluating such materials. An analysis of certain phases of content may be made without any attempt to pass judgment as to the worth of such content. On the whole, this procedure will result in a descriptive type of analysis. To some persons such a practice might appear to be a waste of time and energy. However, this analytical procedure represents a necessary preliminary step in any effort to pass judgment on the values of textbooks. Therefore, in this discussion it will be assumed that analysis is an important preliminary stage in the completed process. If this be granted, it will probably also be apparent that in the processes of analysis and evaluation certain aspects will tend to overlap. Some of the items or features observed when analyzing textbooks will be similar to certain items or standards

that are desirable for use when attempting to determine the worth or value of textbooks. Therefore, it may not always be possible to demarcate, absolutely, the actual processes of analysis and evaluation at all points. This is to say, having made the analysis of certain aspects of a textbook, one will be in position, perhaps, to judge at once of the relative values of such items. In other instances, however, a mere descriptive analysis may not furnish sufficient grounds for passing judgments of worth, and it may be necessary to set up additional criteria or standards for the purpose of judging the value of textbooks. In any event, it will be apparent to any one who attempts to analyze and evaluate textbooks that the two procedures are intimately as well as ultimately interwoven. On the other hand, it might be possible to find by analysis that a school textbook in English, or history, or science, or mathematics contained a certain number of pages, or topics, or problems, and that other books contained a different number of pages or problems and yet not in any way determine the relative worth of such pages, topics, or problems discussed, unless one had set up certain standards for judging the quality of the subject matter included. Furthermore, if it were found upon examination of these same textbooks that certain inaccuracies of statements had been made, then the very act of analysis in this instance, is almost equal to an evaluation. So that whether analysis must always necessarily precede evaluation or not will be dependent, in part, upon the nature of the items or aspects which are being examined.

4. **The nature of analysis.** Considerable care should be taken to make clear that each individual means the same thing by what is here designated as analysis. It is possible that even when taking this precaution, differences of opinion will still exist among different individuals. It is at this point, and on this aspect, that the scientist and the philosopher have often found themselves in disagreement. By many authorities, analysis is thought of as a process which is, primarily, characteristic of the scientist whose interest lies in a faithful

description and report of existing facts and data. Likewise, by many authorities, evaluation is thought of as a process which is primarily characteristic of the philosopher whose chief interest lies in determining the relative values or worth of facts and ideas. The suggestion has already been made that it may be difficult, at times, for all persons to agree on the precise meaning of the term, analysis. However, as a point of departure, some kind of statement should be agreed upon as to what is meant. *Therefore, by analysis herein will be meant a clear, faithful, descriptive report of the actual data and facts embodied within textbooks representing different subject fields.* Such an analysis will include as complete an observation as possible of all of the varied items or aspects represented under certain designated master headings or categories and their corresponding subdivisions.

5. The nature of the main or master divisions to be employed in an analysis of textbooks. (1) The first important master item or division should include the authorship personnel and the underlying philosophy or points of view of the author or authors. Subdivisions of this master item should consist of the points of view of authors explicitly or implicitly stated; of specified reasons, and purposes for writing the textbook; of the kind of training and experience of the author or authors; of the method of procedure used in writing the textbook. Too little emphasis usually has been placed by many writers upon the points of view held by authors of textbooks.

(2) The second master item has to do with the nature of the subject matter, which by some writers has been designated as the content of the textbook. Amplified phases used later on in this discussion under this second master heading are as follows: Recognition or statement of general aims of education as a whole; recognition or statement of aims applicable to the teaching of the different subject fields; selection and arrangement of subject matter in harmony with stated aims; influences of committees and leading proponents and authorities; selection and arrangement of subject matter in terms of pupil experiences; arrangement of subject matter in terms

of so-called teaching divisions or units of knowledge; recognition of the relative emphasis or perspective of different aspects of subject matter included; accuracy and reliability of factual data included; the nature and amount of illustrative materials used; adaptation or suitability of textbook content to the courses of study actually agreed upon for use by the school staff in question. Incidentally, it may be added at this juncture, that this second master division just suggested should occupy well on to one-half or more of the total attention given to all of the different items of a whole analysis outline.

(3) The third master aspect or division outlined for consideration has to do with the instructional aids and helps for the using of textbooks, found directly within the textbook or elsewhere. These are herein suggested in more detailed form than sometimes has been customary. Even when the items mentioned are actually found within textbooks, it is still possible that inexperienced teachers or experienced teachers of the "laissez faire" type may overlook them in their use of textbooks. The subdivisive items outlined, later on, under instructional aids are such, for example, as follows: tables of contents, lists of tables, charts, at the beginnings of textbooks; questions, summaries, and so forth, at the beginnings or ends of chapters or other divisions, or the inclusion of pictures, diagrams, drawings, etc.; indices, appendices, glossaries, etc., at the ends of textbooks; suggested supplementary visual aids, first hand observations, workbooks, worksheets, etc., outside the textbook as such; suggested collateral sources in other textbooks, and so forth.

(4) A fourth master phase, often included at the very outset of an outline sheet by some writers, in the examination of a textbook, has to do with the mechanical features. No attempt is made to defend the exact order of importance of the various master phases above suggested. Whether the examination of the mechanical features of a textbook be made at the outset or later on does not have a great deal of relative educational significance. No effort is made, furthermore, to suggest dogmatically the relative value of any particular

outline, rather than another, to be used for analysis. Formal and mechanical features cannot, however, justifiably be wholly ignored. The relative importance of this master item varies somewhat, when thought of as applied to textbooks on elementary school and secondary school levels. The following sub-phases have some educational significance: The total number of pages devoted to subject matter; the durability and composition of bindings; the quality of paper used, the general typography of the textbook; the accuracy of graphic reproductions and materials. The educational significance of some of the above sub-phases is quite indirect. Nevertheless, they are important enough to receive some consideration in textbooks for use on the secondary level or area of our schools, as well as on the elementary school level.

(5) The fifth master item, namely, publication and publisher, also, has usually been made somewhat more prominent by some writers than is true in the present treatise. In most of the previously published outlines for textbook *analysis*, this master item appears earlier in order of placement than is true in the present instance. But again, it may be suggested that its exact order in an analysis outline has no special educational significance, that is, whether it comes at the beginning or the end. Its relative educational importance, perhaps, is greater in case of the selection of textbooks, as well as in their analysis than in the act of appraisal. So that this fifth master item, as will be noted later on, has been omitted, or made optional in case of the *appraisal* outline or score sheet. This item of publication and publisher, however, has enough relative importance not to be wholly omitted from any suggested outline sheet used in the general *analysis* of all elementary and secondary school textbooks. But it is questionable whether it should be included in an appraisal outline sheet. However, if appraisers feel that it should be included, then they should simply agree arbitrarily on the number of points to be given for the same. Among the sub-items to be included are the following: The nature and educational significance of the title; the nature of new or revised editions after the first copyright; the prominence of publishers; ways

and means for exhibiting the merits of manuscripts when published.

6. **Reason for using a general analysis outline.** *The chief object of the use of the proposed general analysis outline or check list is to guarantee a ready and intelligent acquaintance on the part of all persons involved with what actually exists in textbooks.* There is always a great temptation for individuals to begin at once, when examining textbooks, by passing hasty judgments upon their worth. It is contended herein that a descriptive analysis of what exists in the content of textbooks is an important initial step in the completed procedure, which consists of analysis, appraisal, and adoption of textbooks. At the outset of this discussion, it, therefore, is assumed that *it is desirable in all instances to make a careful examination of the nature of the content of textbooks, and of their organization, before deciding upon the question of their selection or adoption.* Furthermore, it is assumed that the virtue of analytical examinations will be enhanced considerably, if some agreed-upon common items and procedures be used by all persons who participate in such analyses.

Frequently, one will hear school administrators say that it has been their custom to have their instructors cooperate in the examination of textbooks, before making any adoptions. Granting the desirability of such a wholesome practice, one may raise the question as to how profitable such a procedure is, providing no definite guide be given nor specific suggestions made as to what is to be looked for by such instructors. It would be an interesting experiment to attempt to find out whether analyses made without the use of any outlined suggestions would bring about as desirable results as through the use of such suggestions. The present writer makes the challenge that more fruitful results will be obtained through the use of some carefully wrought out analysis outline sheet than without its use. In the light of this challenge, a somewhat detailed statement follows with reference to the nature of the respective items proposed, for use as a minimum, when analyzing textbooks. It should be remarked, again, that ultimately certain supplementations and amplifications will be

necessary, when attempting to analyze respectively, for example, textbooks in English, or foreign language, or mathematics, or science, or in any other school subject. In other words, when examining a textbook in English, one will naturally look for some phases not necessarily similar to those looked for when analyzing a textbook in science. Nevertheless, it has seemed desirable, as a first step, in the total procedure, to suggest an outline for textbook analysis applicable to all subject groups and to their corresponding subdivisional subjects.

7. Interpretation or explanation of the elements or items in the proposed general analysis outline. In this chapter, therefore, an attempt is made to call attention to certain elements that appear to be applicable in the analysis of the textbooks in any of the different elementary and secondary school subjects. The exact order of the items discussed in some detail herein is the same as the order which appears later on, in Chapter IV, in the actual outline itself which is submitted. No sanctity is intended with reference to the exact order in which these items appear. Furthermore, it is thinkable that the exact formulation of the items might be sometimes otherwise stated by other persons, and that certain sub-items probably will occur to the reader, which have not been explicitly stated in the outline sheet, which is presented later on in this treatise. It will be noted that the following general analysis outline, which has been anticipated in the previous discussion, is greatly simplified by including only *five grand divisions or master phases*, namely: (1) authorship; (2) nature or composition, selection and organization or arrangement of content, together with some suggestions on methods of teaching; (3) use of instructional aids within the textbook itself, and other supplementary aids; (4) the format and mechanical features; (5) publication and publishers. The somewhat detailed discussion which follows is justified on the ground that it is essential that the items involved in attempted analyses be made as clear as possible to all individuals who may participate in this analysis.

(1) *The relative significance to be given to the authorship personnel of textbooks.* Obviously, the authorship personnel, and the organization of the content of any textbook are very closely interrelated aspects. Nevertheless, authorship is of sufficient importance to be considered on its own account. The point of view or theory held, or, if you choose, the philosophy as a whole, of any author of any textbook should be regarded as having considerable educational significance. The point of view includes, in part, educational issues which are outstanding, such, for example, as: How far should the industrial, economic, and social aspects of the content in history textbooks supplement or modify the earlier tendency to emphasize merely political and military aspects? Sometimes, the point of view can be detected at the outset either in the preface, or introduction; sometimes within the body of the discussion of the textbook, or perhaps both. It may not always be easy to discover the author's point of view, explicitly stated in his textbook. In any event, *it is essential, in making an analysis of any textbook, that individuals try to discover the exact nature of the point of view, theory, or underlying philosophy which is reflected in the materials or content of the textbook as a whole.* Some individuals, of course, may question the advisability of considering the author's statement of his point of view or philosophy in the preface or elsewhere within his textbook. The position herein taken is that it is very essential to know and understand clearly the point of view of any author of any textbook in order to understand and use it most intelligently.

In some instances, the specific aims or reasons announced by an author for writing a textbook may overlap with the statements given by him, relative to the point of view as a whole held by him. In other instances, it may be true that additional aims to the point of view, for writing the textbook may be stated. These may be expressed, for example, in terms of the nature and organization of the content; or, of the method of teaching; or, of the grade of school work for which intended; or, of the pupil's interests and capacities as such. So that, in many instances, the statement of the point of view

held by the author, and the statement of his purposes for writing the textbook may be found to be combined and, in other cases, separately stated.

The type of academic and professional or educational training which authors have had deserves some consideration. The types of teaching experiences which they have had in elementary and secondary schools, or in teachers' colleges, or in other higher institutions of learning, along with opportunities for travel, are elements too important to be wholly disregarded when making analyses of textbooks. The recency of both training and the experience of the author is likewise of some consequence. Sometimes, these data cannot be found easily within published textbooks. Of course, some persons will raise the question as to whether these data should be considered. In any event, it seems desirable that such data be procured from some reliable source or other, by persons who are responsible for analyzing respective textbooks. Moreover, such data should be considered as educationally significant.

The writing of some textbooks has been based upon research or careful investigation and upon extended experimentation. Such research and experimentation, in some instances, has been carried on for a series of years under somewhat controlled situations in the classroom. Then, the results of the investigation have been recorded and, in the light of these findings, certain modifications have been made before the final publication of the manuscript. Other books have been based, primarily, upon the cumulative experiences and observations of the author, but not based upon controlled classroom tryout or experimentation. All kinds of variations, of course, of this second type of writing will be found to exist.

A factor that is not so easy to describe in all of its fullness has to do with the style of language employed by the author. Some books are so written that they seem to carry pupils forward in a more or less easy manner without blocking or hindering their thinking. For want of a better phraseology this may be designated as an easy and free style versus a labored manner of presentation. Again, closely related to the above,

may be mentioned motivated reading for the pupil, in which the statements that are made will appeal to pupils' interests and abilities and desires. Also, in the third place, in some subject groups, perhaps more than in others, terminology may tend to be too technical for the pupils to understand. How to avoid being too technical and yet technical enough to insure the continuous progress of the pupil becomes a real problem. Some of these factors, just mentioned, will apply more directly to certain subjects, and other factors, to other subjects. Some persons may feel inclined to include the above aspects under the nature and organization of content rather than under authorship. It probably makes little difference under which master division these are included so long as they are not wholly ignored. It is obvious that some textbooks possess a much more labored style of treatment than others.

Perhaps an additional element, here designated as general intelligibility of the treatise as a whole, has already been covered in large measure in the above items, yet it is clear that the textbook as a whole should be adapted to the needs of the learners for whom it is intended. It is obvious that the item mentioned above and characterized as the general style of the author's language, must be judged in a rather highly subjective manner. Consequently, it is likely that somewhat wide variations may sometimes result in the event of respective judgments made relative to this aspect. Despite the fact that subjective reactions will sometimes obtain, such analyses will nevertheless have considerable value. The fact that some judgments are highly subjective rather than objective does not render them wholly valueless. In fact, reliable objective measures of any sort must always be accompanied by some reflective thinking, which is quite subjective in nature. It might be contended that this point belongs more clearly under evaluation rather than under analysis.

It may not be amiss at this juncture, to call attention to the fact that two of the elements outlined under the master division designated as authorship will call, primarily, for subjective, analytical reactions, namely in the instance of determining the point of view, or the philosophy of the author,

and in the case of determining the general style of language employed by him. On the other hand, the attempts to analyze those factors having to do with the announced avowed aims for writing the text, or the author's training and experience, or his method of writing the text, are primarily objective in character. In some of the sub-aspects of these aforementioned five master items, a combination of both the subjective and objective types of analysis will, at times, necessarily be included.

The likelihood of the overlapping of the various aspects which are outlined with reference to the authorship of textbooks, and of those pertaining to the content and its organization has already been acknowledged. Once this is admitted, however, it should be added that the importance of authorship of textbooks has, ordinarily, been too meagerly and too raggedly considered by most writers. Enough has been said to indicate, of course, that mere reputation of an author as a great scholar, or his superior standing as a college instructor is not a full guarantee of a successfully written textbook for use in elementary and secondary schools, important as such reputation may rightly be regarded to be by many persons in certain respects.

(2) *The relative significance of the nature of the composition, of the selection and of the arrangement or organization of the materials of instruction found within the body of the discussion of the textbook, and of the methods of teaching suggested.* It is customary for some writers to separate, for purposes of discussion, the *selection*, and the *organization* or *arrangement*, of the content of subject matter taught. For theoretical purposes this is undoubtedly desirable. In the actual administration of subject matter in the classroom, however, selection and organization usually, if not always, go on simultaneously. In the present discussion, it will be noted that selection, and arrangement or organization, of subject matter, have not been separated, but have been outlined as parts of a unitary process, as is shown, for example, in one subdivision under division II of the outline, or, in the case of

other subdivisions in the outline sheet of common items for use in analyzing textbooks.

Various criteria have been considered by different proponents in the selection and organization of materials of instruction in elementary and secondary schools. This task represents a complicated problem. For example, (1) the stage of society or of civilization existing in any country at any specified period of history; or (2) the status of the development of a subject or subject group; or (3) the nature of the individuals to be educated; or (4) the accepted aims or purposes of secondary education as a whole, may be considered. These have all been suggested by different writers at different times.¹ A number of committees, national and regional in scope, have used the last of these criteria,² namely, educational aims or objectives. Some curriculum counsellors have suggested that the objectives of education as a whole be used as the outstanding criteria in the formulation of subject matter to be taught.³ It is here conceded that certain criteria other than educational objectives, such as have been suggested by Williams, Parker, and by other writers, not mentioned in detail should be considered.⁴ It is, however, desirable, in any event, to consider the relative importance of recognizing the general aims of education, together with their amplified aspects as applied to the different subject groups. It is thinkable, of course, that, at times, all of the above criteria may simultaneously need to be taken into account, in their due proportions.

It is pertinent to insist, in the midst of the present accumulation of the almost unwieldy mass of subject matter to be taught in our current elementary and secondary schools, that such materials of instruction be consciously pointed toward the realization of desirable and worthy purposes of the elementary and the secondary schools. During recent years,

¹ Williams, L. A. *The Making of Curricula in High Schools*, pages 8-18.

² N. E. A. *Cardinal Prin. of Sec. Ed.*, and N. C. A.—H. S. *Curriculum Reorganization*.

³ Bobbitt, Franklin. Chapter 11, *How to Make a Curriculum*.

⁴ Parker, S. C. *Methods of High School Teaching*.

along with the increasing complexity of life, these general aims of the school have inevitably multiplied. These can be found listed in detail in committee reports, and in textbooks on principles of elementary and secondary education. Nothing is gained from simply deploring this increase in the complexity of social, economic, and industrial conditions, nor in decrying the inevitable increase in the number of general educational aims or objectives that need to be recognized by elementary and secondary school people. Such social phenomena represent conditions to be faced that are as real as the facts of natural science though, in most instances, they are more difficult to control. It seems obvious that some portions of subject matter, when selected and arranged for instruction in the schools, should in part, at least, always point toward the realization and fulfillment of desirable ends to be reached in the field of elementary and secondary education as a whole.

It should be parenthetically remarked, at this juncture of the discussion, that the acceptance of the above obligation does not ignore the necessity of recognizing also the need for mastering certain fundamental routine aspects in connection with the respective subject groups, in order that pupils may gradually progress in their advanced study, but it does mean that a common obligation should be set up to be recognized by the whole of the elementary and secondary school teaching corps, as well as by all authors of textbooks. When once this common obligation of recognizing the general goals of education is acknowledged by all of the teaching groups, then each instructor should be allowed to use many additional procedures to develop in pupils the mastery of certain fundamental routine aspects which enable them to go ahead without distinct handicaps and penalties in their normal and continual progress in their work in each advancing successive year.

Another phase of large importance has to do with the clear formulation of direct classroom teaching aims and purposes that are applicable to the different subject groups, and, to the different grades of the elementary and secondary school system involved. In fairness to the most successful instructors of the past, it should be said that, undoubtedly, many,

if not most of them, have always had in mind certain classroom teaching aims to be accomplished, in the presentation of their chosen subject matter. At the same time, with equal pertinence, it can be maintained that, in many instances, other instructors have merely passed along subject matter delivered to them in neatly bound textbook packages, without ever asking why, or for what reason they do offer this or that subject content. General aims of elementary and secondary education as a whole, and so-called classroom and subject aims should be regarded as complementary to one another. The recognition of such aims should help to avoid the perfunctory presentation of subject matter as an end in itself.

Moreover, intelligent counsel, given by persons located in higher institutions of learning (and, for whom one must have great respect, because of their scholarship in these fields) should be sought. In all of this, not only an analysis of what is, or of what now exists, but also an attempt to anticipate what ought to exist, or, be true, is essential. This procedure will avoid any tendency to continue analysis of what is, indefinitely, without any attempt to pass judgment later on, upon what ought to exist.

Much of the criticism against elementary and secondary school aims in the past, perhaps, is not due so much to the fact that we have disagreed on the necessity of having general aims consciously set up as it has been due to the fact that these aims have not always been determined, on a satisfactory basis, nor with as great validity as possible. If it should be found that an already adopted textbook in any one subject group or other has not proposed any aims to be realized through the subject matter outlined, then the task of instructors is somewhat more difficult, namely, the attempt to formulate certain aims or ends to which the subject matter of the textbook involved are applicable. In brief, the practical problem appears to be as follows: In case desirable teaching aims of the subject group are announced by the author, then instructors ought to be able to realize to some degree such aims; on the other hand, in case such aims are not clearly set up by the author, or authors of textbooks used, instructors will need

to adapt the subject matter of the textbook to desirable aims that have been agreed upon, by respective competent school officers, applicable to the subject group in hand.

Whenever a consequential aim, or point of view, has been announced by the author, or authors, it is relevant to inquire as to how far the nature of subject matter throughout the textbook lends itself to the fulfillment of it. If, for example, in a textbook on English composition, it should be stated that one of the points of view is that of "functional" grammar, the ability of the instructor to see or not to see whether the selection and arrangement of the content of the textbook is such as to assist in the fulfillment of this point of view is consequential. The above suggestion, obviously, approximates, at least, a partial or semi-valuation.

4 The evolution of textbooks and of courses of study, as is true of many other kinds of aspects of the modern school systems, is a many-rooted affair. It is not always easy to detect the most influential factors at work, out of the possible number that may have been involved. During the last decade and a half, for example, certain new influences have appeared in textbook making and publishing. When one traces out the evolution of textbooks during the nineteenth and twentieth centuries, in the various fields of school subjects, one will find that certain dominant theories, held at certain periods have influenced the nature of the content. The "formal discipline" conception of the mind is an outstanding example of this, during the nineteenth century and earlier. In more current times, the influence of the points of view held by national and regional committees, or of individual proponents, working upon the reorganization of elementary and secondary school subjects is frequently apparent. Outstanding instances, for example, are to be found in the case of the Classical Investigation in Latin, of the National Council of Mathematics, of the Modern Language Association, of the National Council in English, of the reports of Committees on history, of the National Reports on Reorganized Science, and of other subjects. In many instances, the so-called patterns set up by members of committees, or by individual proponents have

been adopted practically *in toto*. In some other instances, modifications of the suggestions made by the above named types of committees, or, of the opinions of outstanding proponents have been made.

On one item involved in textbook writing, apparently there has been little, if any, disagreement among educationists. Reference is here made to the almost threadbare contention that subject matter should be adapted to the ability of pupils to comprehend, or perhaps, in even more modernized form, to the abilities of pupils having many individual differences, in their power to comprehend. This oft-repeated phrase, namely, "psychological adaptation" of the content of textbooks to pupils' capacities and abilities, will obviously, never be out-moded. For human nature will continue to be what it is now, relative to the nature of the learning process. Once this tenet is granted, however, it is questionable whether authors untutored in the real nature and virtue of psychology, and its application to education have seen the fullness of the meaning of this trite phrase, namely, "psychological adaptation of subject matter." No apology here need be made for referring to the above psychological tenet in its application to textbook content, or to course of study content, or to any other flexibly organized materials of instruction. To any one who is at all versed in educational psychology, the phrase "adaptation to individual differences of pupils" represents a very important as well as very composite affair. The statement involves the psychological differences of pupils with reference to their temperamental traits; with reference to the effects of their more informal social life and experience outside the school. This is but a brief array of representative phases of the existing individual differences of pupils. These represent an important phase of the adaptation of subject matter to the levels of the comprehension of learners. In parenthesis, let it be remarked that the impossibility of separating content and method of instruction in classroom practice is here very clearly manifest in connection with this last named factor.

When one considers, therefore, such aspects as meaningfulness and clarity of expression in textbooks, or the necessity for making a gradual transition from the easier to the more difficult problems and processes, one is conscious of the fact that many angles and factors of the learner's experience need to be considered. To be more specific, for example, the ability to comprehend technical terminology used by authors and the ability to understand the vocabulary involved in different subjects will vary among pupils when perusing any textbook. Incidentally, it here may be remarked that certain authors of recently written textbooks are taking this vocabulary problem into serious consideration. The degree of meaningfulness, or its lack, will be dependent upon many varying factors. Lack of meaningfulness may be due to lack of aptitude on the part of the pupils to master technical terms and vocabulary; it may be due, in part, to lack of interest in the subject matter; it may be, due to poor previous training; or, to other reasons not designated above.

How to organize or reassemble subject matter based upon textbooks or other sources most profitably for successful presentation in the classroom has been a well-worn discussion for many years past. For instance, the "topical" method was stressed in certain subjects, such as history. In any event, it is obvious that a fragmentary and disconnected presentation of any kind has been opposed by the best authors and instructors for many years. Recently, one of the outstanding tendencies has been to arrange subject matter in terms of so-called "teaching units". Some authors of textbooks have conformed to this plan in their current writings. Certain virtues are claimed for this type of organization. At this juncture, our chief interest is to attempt to determine whether the textbook materials are so organized or not, and not to attempt to determine the virtues or limitations of the same. Again, certain other recent authors, for example, have not stressed teaching units *per se*, but have emphasized so-called "situations", or "conditions", or governing "principles". In a book entitled "Cooperative Supervision in Grades Seven to Twelve", the present author has discussed briefly the virtues

and limitations of "teaching unit" organization of subject matter.

Balance and perspective or proportionate distribution of emphasis upon different topics included in a textbook is of considerable consequence. In the actual selection of subject matter from any source whatsoever, the problem of relative values is always involved. This, it will be remembered, was one of the criteria suggested by the late Professor S. C. Parker of the University of Chicago. In his discussion, one question that arose was whether a certain aspect of foreign language, or of mathematics, would be of as much value to the pupils concerned as would be the offering of some other subject or subject group. In the present treatise, however, balance has to do with relative values, or emphases placed upon the various phases included within any one textbook or other. This item should also be regarded as having considerable consequence under special or differentiated analyses outlined later on submitted.

This element, called relative balance or perspective, has to do with whether an appropriate emphasis has been given to the different phases of the subject discussed in a published manuscript. One way of estimating such emphasis might be to note the amount of linear space devoted to the same, or perchance, the number of pages. Whether this should serve as a final procedure for passing judgment on a textbook, in this respect, may of course be open to question, but at any rate, the problem of the distribution of emphasis given to certain phases of work is an item that should be carefully considered in some manner or other.

One of the biggest improvements that has been apparent, during the last century, has had to do with the accuracy and reliability of factual data presented in textbooks. One needs only to trace back, for a half-century or more, the nature of the content of subject matter found within textbooks, in respective subject fields, in order to discover the progress which has been made in this respect. At the present time, factual errors in textbooks are regarded as almost inexcusable, in the case of some, if not in the case of all of the subject groups.

Furthermore, with pertinence, it may be rightly insisted that original data presented by authors themselves, or data borrowed from other sources, should be as accurate and reliable as it is possible for them to be, in the light of supporting evidence. This involves both accuracy of the data *per se*, as well as accuracy of quotations taken from other sources used. One difficulty, of course, occurs here, namely, points of view, as a whole, held by authors, even within the same field, will sometimes vary. Therefore, the corresponding supporting evidence will necessarily vary somewhat.

The nature, amount, and value of illustrative materials appearing within the body of textbooks will differ greatly. The illustrations may be few or many, representative or limited in scope, meaningful or relatively empty. This aspect may be studied and traced with interest even from the time when Comenius' *Orbis Pictus* appeared, during the seventeenth century, down to the present day. One may trace with interest and profit this phase in elementary and secondary school textbooks of the nineteenth and twentieth centuries. Elementary science textbooks furnish a good illustration of the attempt to improve in making abstractions more concrete and realistic to pupils, at the present time. Present-day textbooks in the field of history and social studies likewise, show improvements in this feature. Precaution, of course, needs to be taken against assuming that the mere appearance of illustrative materials in textbooks will absolutely guarantee better learning on the part of the pupils. An illustration of this can be found in the one-time over-worship, and over-formalism of the Pestalozzian "object lesson" movement in Europe and America during the latter part of the nineteenth century. Despite this precaution, one is justified in claiming that appropriate accompanying illustrative materials, incorporated within the body of any textbook within any subject group, are an asset in the case of textbooks designed for use on the elementary school level, junior high school level, as well as during the first years, at least, of the senior high school level and even on into the junior college level or area and above.

Variations of practice occur with reference to the agreement or non-agreement between textbooks adopted, and between the aims or purposes of the courses agreed to by the respective teaching bodies in question in different localities, whenever no available written statements of the purposes of the courses of study offered in a school system are found to exist on paper in typewritten, mimeographed, or other printed form. Even where purposes for offering courses are available in explicitly stated form on paper, sometimes, the textbooks are adopted first and, then afterward, an effort is made to see how the textbook materials may perchance relate themselves to such purposes. In any event, it is warrantable to suggest that a comparison should be made between the content of textbooks being used, and the courses offered, together with the corresponding purposes or aims of such courses, as formulated by the teaching body and by other school officers, within a given school system.⁵

(3) *Relative significance of the instructional aids found within, as well as those supplementary, outside of textbooks.* One of the most profitable types of analysis that can be carried on by individuals has to do with a scrupulous study of the instructional aids and helps found either within, or else accompanying the textbooks that are under consideration for adoption by any group of individuals.

To the average layman, sometimes to teachers, and undoubtedly to most pupils, unless their attention be called to their value, such features as tables of contents, lists of tables and charts, questions, outlines, summaries, appendices, indices, and glossaries within the textbook, all represent so much dead-weight lumber or mere fillers. Perhaps, a little more apparent is the relevancy of aids and helps found outside of the textbook, by way of all kinds of visual aids, collateral readings, or supplementary problems and exercises often found in accompanying workbooks. Individuals who are not accustomed to writing textbooks, probably on the whole, are little aware of the time, energy, and financial ex-

⁵ Hopkins, L. T. Curriculum Principles and Practices—Problem XIV.

pense given to well-qualified indices or tables of contents, or to well-formulated pertinent questions, summaries or outlines; or to well-selected pictures, drawings, diagrams, etc.; or to supplementary aids and sources suggested by authors of textbooks.

Some textbooks may be strong in one or more of these aspects. Other textbooks may be strong in other aspects, but it will probably be found that no one textbook author will have a "long-suit" in all of the features mentioned under division III of the proposed general analysis outline sheet. Of course, here, as in the case of other elements, textbooks may be strong, but when placed in the hands of untrained teachers, the accompanying instructional aids and helps may have little value for pupils. Undoubtedly, the relative values of the master divisions, I, II, and III, given in the itemized analysis outline sheet in Chapter IV, namely, authorship, content of textbooks and methodology included, together with their accompanying aids and helps should be regarded as very important, whenever attempting to make detailed analyses of elementary and secondary school textbooks.

The point of view of an author, the content of a textbook, together with these instructional aids and their organization, are unquestionably the most important educational features to be noted in making an analysis of a textbook. This statement will probably not be disputed by any one. Furthermore, the details of these aspects are rather numerous and need, for most persons, to be carefully outlined. As was indicated earlier regarding the item of authorship, so likewise here, some of the sub-aspects of the content and its organization, or in other words, of the nature or composition, selection and arrangement of materials of instruction are more easily analyzed with definiteness and objectiveness than are others.

Some of the items included under the master division II of the analysis outline later presented represent, perhaps, predominantly objective aspects, namely, influence of committees and individual proponents, arrangement in teaching units, determining accuracy and reliability of factual data,

and nature and amount of illustrative materials. On the other hand, perhaps the following represent, primarily, subjective phases on the part of analyzers, namely, recognition or statement of general aims; of aims applicable to different subject groups; of organization of subject matter in harmony with teaching aims of different subjects; and of adaptation of textbook materials to courses and the aims thereof actually offered. Again, however, it may be reiterated that a number of these sub-divisional aspects under division II, as a whole, may involve a composite of both subjective and objective elements, whenever making analyses.

(4) *Relative significance of the mechanical features or format of textbooks.* All in all, in comparison with the other factors used in analyzing textbooks, the mechanical aspects, in many instances, have been given an undue amount of emphasis, by many individuals. Nevertheless, this item should not be wholly ignored. Certain mechanical features of elementary textbooks are relatively more important than are those same features in the case of secondary school textbooks. For example, the size and arrangement of the type, in the first few grades of the elementary school, has considerable significance, as does the length of line and spacing, or the placement of pictures, which are suggested in Chapter IV in the outline for textbook analysis. One item suggested includes textbook typography, and another item includes graphic reproductions, and pictures. These last named items do have some relative educational bearing and significance. The item pertaining to graphic reproductions, in some respects, is the most important of these three. The item referring to quality of paper has some direct psychological and pedagogical bearing. The item pertaining to durability of binding has very little, if any, direct bearing on the matter of the final selection of textbooks so far as the educative process of the pupil is concerned. Of course, financially speaking from the point of view of selection, primarily, it has a larger relative value. Therefore, later on, in attempting to set up bases for *appraising* textbooks the mechanical features, obviously,

should not be given a place equal to authorship or to content and its organization, or to instructional aids and helps.

(5) *The relative significance of publisher and publication of the manuscript.* By many writers and by the earlier formulators of so-called "score cards" for "rating" textbooks, a notation of publishers and of publications, usually was placed early in any scheme or plan for analyzing or judging textbooks, probably, chiefly because the title, the copyright, and the name of the publishing company appear first, in convenient form, in any published manuscript. One may, of course, as well talk of a house without a roof in the temperate zone, as of a book without a title. It is important to note the exact title given to a textbook. The date of the copyright is probably more significant in certain fields than in others. This depends much upon the type of data included in a published manuscript. The more recent the edition is, in some instances, the more valuable it is felt the material will be. But recency and accuracy of material are not necessarily of equal value in all instances. On the whole, educationally considered, it appears that the titles of elementary and secondary school textbooks should give as accurate a cue as possible to the nature of the content included within them, although of course, most titles need to be, necessarily, generic or general and comprehensive in nature. Revised editions or new editions should be justified largely on the grounds that they really add to, or subtract from, or modify, in some way, the original edition. Camouflaged revised editions cannot ever be easily defended. Thus, authors should pointedly designate the nature of revisions made in manuscripts and never simply put between new covers wholly unchanged materials unless frankly designated as such. This is a worse practice than putting old wine in new bottles, or vice versa.

The matter of publishers and publishing houses is very difficult to discuss with fairness to every one, and with clarity. Publishing companies have multiplied and improved very much during the last quarter of a century or more. The means and ways of exhibiting the merits of respective pub-

lications, however, vary considerably. And yet, many desirable practices in common do exist. It is evident that some phases of the publisher's work are involved both directly and indirectly, whenever analyzing the content of textbooks, as found, for example, in the ability of companies to present good illustrative and graphic material within the body of the textbook.

It will be discovered that parts of the above discussion tend to be almost semi-valuative in nature. Admittedly, it is rather difficult to avoid the discussion of appraisal or valuation, as well as of selection, whenever considering the item of publishers or publishing companies. As a matter of fact, in terms of *analysis*, the reactions made relative to publications and publishers should be largely an abbreviated descriptive statement of the name of the book including the title, the date of the first copyright, and of revised editions, together with indicated modifications, and the name of the publisher.

Before closing this part of the discussion, let it be reiterated that of the suggested general outline sheet for textbook analysis, Division I, dealing with authorship, previously has been neglected considerably, especially in the analysis and recognition of the point of view held by the author, or authors, as well as in the recognition of the method, experimental or non-experimental, used in writing the textbook. In agreement with most other authorities, Division II, namely, content and its organization, of the general outline sheet submitted herein, has a major relative importance. Division III, having to do with instructional aids and helps within, and outside of the textbook occupies a larger place in this presentation than has usually been given to it. Division IV, including the mechanical features especially on the secondary school level, is, relatively speaking, unimportant, but should not be wholly ignored. In Division V, the largest significance of the publisher or publishing company relates itself indirectly to the content, and directly to the name given to the published manuscripts. A later discussion will attempt to formulate some standards for *judging the worth* of textbooks used in elementary and secondary schools. *It should be kept*

in mind, constantly, that this first step, in the total procedure, namely, a faithful descriptive analysis and report of actual data found, based upon the scrupulous examination of textbooks must be considered to be all-important. This first step is taken in an effort to discover some bases, for later on, setting up satisfactory criteria that can be justified in formulating a general outline for scoring and *appraising* elementary and secondary school textbooks.

8. **A proposed general outline of common items for use in analyzing textbooks.** In the light of the previous characterizations given, a proposed general outline is later on submitted in Chapter IV for use in analyzing all textbooks. It will be noted that some simple instructions are given to aid individuals in the more uniform use of the outline sheet. One object of this general outline is to call attention to a minimum number of items which appear to be important, whenever examining textbooks. One limitation in the use of such a general analysis outline is that the procedure may tend to become too mechanical and stereotyped in nature; therefore, the ninth suggestion, under the instructions, is given, namely, that individuals should add items of their own on separate sheets in order to supplement items included in the general analysis outline. It should be clear to everyone that the analysis outline sheet is intended to represent only the minimum number of reactions which any one would be expected to use in making an examination of any published manuscript. The general outline sheet is intended predominantly for use in analyzing textbooks on the junior and senior high school levels, or areas, but in most respects, it is also adapted to the analysis of textbooks published for the school grades below the seventh, as well as above the twelfth grade.

CHAPTER III

Common Items for Use in Appraising All Textbooks

1. **Appraisal, the desirable sequel of analysis.** Chapter II had to do with the *analysis* of published manuscripts. The present discussion has to do, primarily, with the *appraisal or evaluation or scoring* of elementary and secondary school textbooks. It is asserted herein that the work of *appraising* textbooks can be greatly expedited, providing careful *analyses* have been made previously of the same publications. Stated in another way, a great amount of time and waste energy can be saved, whenever attempting to evaluate textbooks, in case they have been examined first, in order to discover what is the exact nature of their content. The summarized description of the nature of such content will furnish an appropriate beginning point and basis for determining the relative values of textbooks. To some persons the present chapter will, at first, appear to be over-repetitious in nature, in the light of the discussion in the previous chapter on analysis. However, it is herein contended that economy of time and energy will result in the end through this recommended procedure.

In some instances, it will be found that individuals, including elementary and secondary school teachers, supervisors and administrators, as well as those individuals who serve on textbook commissions, will not have had much experience in evaluating textbooks. Whenever this is found to be true, it is definitely recommended that the general analysis outline be used first, in order to acquaint such individuals with the content of the materials of instruction that are to be considered. In the event that individuals have had some previous experience and training in judging the worth of textbooks, this preliminary preparation, through first-hand examination and analysis, may be greatly shortened, and even now and then, in exceptional instances, be wholly dispensed

with. Whenever well-qualified and mature individuals are participating, it will occasionally be possible to carry on both the analysis and evaluation of textbooks simultaneously. Great precaution should be used, however, before dispensing wholly with the use of the preliminary general analysis outline sheet, which has been previously recommended. In any event, usually, it will be more satisfactory, in most school systems and in most situations, wherever adoption is an issue, to assume that this preliminary acquaintance with textbooks, through the use of the general analysis outline, will make the general appraisal, or evaluation or scoring more reliable, and very likely, in the total amount of time consumed, more economical.

2. Use of the term appraisal sheet substituted for rating sheet. The term appraisal or evaluation will be used throughout the present discussion rather than the phrase "rating sheet." This is done for at least two reasons. In the first place, some persons are antagonistic to "rating sheets" for use in judging textbooks, just as they are in the case of "rating sheets" used for judging the worth of classroom teachers. Furthermore, it probably is not always absolutely necessary to make *quantitative* estimates of textbooks in order to judge their worth. For, under some conditions, a *qualitative* estimate may be as helpful as quantitative. The phraseology, namely, "rating sheet", often tends to suggest, to some individuals, merely quantitative estimates of textbooks. *It appears to the writer that the qualitative and quantitative appraisals or evaluations each possess some relative virtues.* Later on in Chapter IV, however, the phrase "score sheets" will be used in connection with the quantitative estimates. It may be true in practice that in some instances in some school systems, the qualitative evaluation will best serve the purpose desired, and in other instances, the quantitative will render the best service. Under some conditions, of course, it might be advisable to consider, simultaneously, the qualitative and quantitative estimates or valuations. Existing circumstances and conditions should, in part, determine whether one or the

other, or both types of appraisals should be used. Therefore both qualitative as well as quantitative general appraisal sheets have been submitted in the next chapter.

3. **Some common or similar items to be recognized in attempting to appraise textbooks in the various subject groups.** As has been stated previously, scrupulous analyses should precede efforts to appraise subject matter. Here again, as in the case of the *general analysis* outline, it is desirable to think first of the common items that should be used for judging any textbook, and, afterward, of the differentiated items applicable in detail to the respective subject groups. If this be granted, it is pertinent to ask at once, *How far is it possible to formulate satisfactory standards for judging textbooks based upon the similarly outlined items, suggested for use in textbook analysis?* Before attempting to answer this question, a further inquiry may be raised, namely, Can any helpful criteria or characteristics be set up when formulating what has herein been designated as a general appraisal or evaluation outline for judging textbooks?

4. **Some suggested characteristics to be kept in mind when formulating common standards for judging the worth of textbooks in all of the different departments.** What bases or characteristics shall be considered in attempting to formulate a common body of standards for judging the worth of textbooks, in case of all of the departments of elementary and secondary schools? Any dogmatic answer to this query is not easy. Nevertheless, it is possible to make a limited number of constructive suggestions. In the *first* place, standards for evaluating various aspects of textbooks should be just as objective as possible. In the *second* place, standards should be interpretive in nature. In other words, judgments relative to specified aspects should be used, only, whenever they add to the real virtue or strength of the appraisal as a whole. In the *third* place, the standards used should be such as to put the proper relative emphasis upon the less important, and upon the more important aspects of a textbook. In the

fourth place, standards should be representative of a variety of important elements. 'In the *fifth* place, the items included as standards should be inclusive enough to cover a wide range of factors, in order that no important elements will be wholly omitted. For example, Are the items which are considered sufficiently comprehensive in nature? In the *sixth* place, standards should be as simple as possible, so as to avoid making impracticable their application, or actual use of the general appraisal outline. *In summary, then, the items to be included in an outline of standards for judging the worth of books should be as objective, as interpretive, as well-proportioned, as representative, as inclusive, and as simple in nature as possible.* The above bases are worthy of consideration in evolving, or in formulating an outline of standards for judging the values of textbooks. The characteristic of objectivity signifies that certain items can be directly observed without needing to read into, or between, the lines of the statements of the author, as for example, the number of pages included in a book, or the number of illustrations used. In this instance, the items looked for leave one in no doubt as to their actual existence in the textbook. The aspect characterized as interpretiveness signifies that the items used, when judging textbooks, be as meaningful and significant, educationally considered, as possible. Balance or proportion signifies that an appropriate distribution of emphasis should be placed upon major and subsidiary aspects or items. Representativeness implies that the items included should be varied enough so as to consider all the significant types of aspects under any subject. Inclusiveness means that a wide range or scope of elements represented in any subject should be covered. Simplicity is intended to guard against making an outline so complex and detailed as to become unwieldy in its actual practical use. With these six characteristics in mind for formulating an evaluation, or score sheet, the following discussion is submitted for the consideration of both educational theorists, and of school practitioners, and for any other groups which examine textbooks.

5. **The nature of some common items to be used in appraising textbooks.** No attempt is made in this discussion to follow out, in exact order, the six characteristics enumerated above, namely, *objectivity, interpretativeness, proportion, representativeness, inclusiveness, and simplicity*. As was true of the previous general outline, presented for consideration in the *analysis* of textbooks, so here, the first item to be suggested has to do with the authorship personnel.

(1) *Appraisal items pertaining to the authorship personnel.* In order to simplify somewhat the actual process of appraisal, it is possible, if desired, to combine the point of view or theory of an author with his aims stated for writing his textbook. For example, it is pertinent to ask, *How clearly does the author state his underlying theory or point of view as well as indicate the aims or purposes for writing his textbook?* This suggests an all-important item for consideration. It will be noted that this statement combines several items included in the previously proposed outline of common elements for use in the *analysis* of textbooks. In the event persons who appraise subject matter, either *qualitatively* or *quantitatively*, wish to do so, the point of view, and statement of purposes for writing the textbook, may be, either combined or not, at the option of the appraiser. Whether one be making quantitative or qualitative estimates, the statement of the point of view and of the reasons for writing the textbook should be regarded as relatively very important.

On the whole, the nature and recency of the experience of the author should be given some consideration. Whether this item should be considered in the final valuation of any textbook, may, of course, be open to debate in the minds of some individuals. Whether the author's experience is satisfactory or not for writing a textbook, will be reflected, in part, many times in the statement of his point of view, or in his aims for producing the textbook, or in his actual organization and presentation of the content. It is likely that in the case of the proposal made later on, differentiated or special appraisals

made in terms of respective subject groups, the relative emphasis will, undoubtedly, vary somewhat concerning the above item. An important question, therefore, to be considered in a general appraisal outline is, *How well do the training and experience of the author appear to qualify him for producing the textbook in question?*

Another, and increasingly pertinent question is, *Has the writing of the manuscript been based upon controlled experimentation under actual classroom situations, or upon a significant teaching experience, or, perchance, upon a very well thought-out theory apart from actual classroom experience and experimentation?* For the procuring of objective evidence of the above named items, the appraiser will need to depend either upon the author's testimony, or often upon other reliable sources. All things being equal, perhaps one would be justified in pronouncing that textbook the more valuable which had been based upon well-systematized experimentation and try-out. It should, however, be recognized that different gradations of success may be represented in either the experimental, or on the other hand, in the non-experimental method of writing, or, again upon the basis of reflective thinking. Tryouts of classroom materials in elementary and secondary schools, even though not done under highly controlled conditions should be given a higher appraisal than where tryouts of no kind have been carried on. On the whole, reliable testimony given to the effect that textbook materials of instruction have been tried out should lead the appraiser to judge such a manuscript as being of more likely value than that in which no evidence is available relative to systematic experimental procedures. Exactly how successful such experimentation has been cannot be determined apart from the records which authors have taken pains to register, at the time the experimentation was conducted.

A fourth query that should be raised is, *How well does the writer employ a motivating and thought-provoking style of language, and maintain a desirable balance between the use*

of technical and non-technical terminology? One can easily see that this standard might vary rather widely with respect to its application to the different types of subject matter taught. Furthermore, the pertinence of this item will no doubt vary, somewhat, in its application to the different grade levels, or years of the elementary, junior, and the senior high school involved. Some of the appraisals made in the light of this fourth composite item will be more subjective in nature than others, but on the whole, it appears that this item in some form or other, is applicable to some parts of all subject groups which fall within grades seven to twelve inclusive as well as above or below. The first three items proposed for consideration under authorship personnel pertain, more largely, to the author's experience and procedure, *per se*, whereas the fourth standard proposed is primarily pupil-centered in nature.

It will be found, individually, that not all textbooks will rank equally high according to all of the various sub-divisional elements listed above. One textbook, for example, may be outstanding in some of the sub-items suggested for use in passing judgments of worth, and another book strong, in some other aspect or aspects. This will also hold true for the various sub-items listed for use in passing judgments on other master items having to do with the values of *content* and its organization later on. The above discussion brings to the fore one of the numerous difficulties involved in attempting to determine the superiority of one book as a whole over another. The difficulty is akin to many other kinds of judgments which individuals tend to make with reference to the comparative importance of institutions of learning as a whole, or with reference to the reputations of men or women, or with reference to the best kinds of automobiles, and so forth. But in earnestly trying to face this difficulty squarely, lies the possibility of correcting some errors that are otherwise likely to occur in textbook appraisals. It can be said, under the present recommended procedure, in this treatise, that one textbook though not superior in all respects may have certain

definite merits which deserve serious consideration, and that another textbook may possess certain other merits also worthy of serious consideration.

(2) *Appraisal items pertaining to the content of textbooks and their organization, including suggestions on methods of instruction.* This master item, it will be recalled was labeled previously in the analysis outline, "the composition or nature and selection, and arrangement or organization of subject matter including suggestions on methods of teaching." Sub-items under the above caption were also outlined. The first sub-items have to do with different kinds of aims whether recognized, or explicitly stated by the author. Concerning the problem of the general or generic aims of education as a whole a great deal of discussion has taken place. As previously indicated with reference to the necessity for recognizing these aims, little difference of opinion among individuals probably exists. As to the ways and means of determining such aims much greater difference of opinion has existed among educational theorists and among practical administrators and laymen. Our chief interest, however, in the present discussion is to discover whether generic or major aims of education of one kind or another have been recognized. Therefore, under this division of our standards for judging the value of any textbook is to be found the query, namely, *Does the textbook include a recognition of, or explicit statement of major or generic aims of secondary education as a whole which are desirable to be realized?*

- ✓ The mere statement of these generic, and of the subject teaching aims by the author may have comparatively little virtue, unless the nature of the content of the textbook is such as to assist in leading to the fulfillment of them. Parenthetically, let it be remarked again, here, that the employment of a successful *method* by the instructors in charge, in conjunction with the nature of content, is necessarily involved in the effort to adapt subject matter to pupils in the classroom. Such procedure will have much to do as to whether even well-organ-

ized and selected subject matter will actually contribute much if any to the realization of aims (both general and specific), so far as the pupils are concerned. Nevertheless, the nature and organization of subject matter, *per se*, is a factor that must be recognized in part in the complete educative process. So that another pertinent inquiry submitted is, *How well does the nature of the content and its organization lend itself readily to the fulfillment of avowed generic and specific aims of education?* Admittedly, this is not an easy standard to apply satisfactorily, since, ordinarily, it will be colored somewhat by a subjective type of appraisal. This granted, the probabilities are, however, that instructors who employ subject matter in this manner will proceed quite differently from the traditional practice when subject matter has been, or is, taught only for its own sake or as a mere end in itself.

Much of the agitation for the reorganization of subject matter in the schools has been carried on through the recommendations of national and other regional committees. Some of these efforts have been represented by very reputable leaders. It is pertinent, therefore, to raise a query in the following form, *Does the obvious influence of any committees or individual proponents in the selection and organization and method of the presentation of the content appear to be vital?* It is comparatively easy to detect the influence of the recommendations of various committees, or of the points of view of prominent proponents. It is not so easy to pass judgment as to how vital these influences are. All kinds of pre-conceptions and prejudices will tend to affect judgments pertaining to this item. It is relevant, nevertheless, to raise the question as to how important these influences really have been or are, and, then to give some reflection to their justifiability and acceptability.

Whether textbook content can be so organized as to appeal to the capacities, abilities and interests of learners has been discussed for many years. The real issue, perhaps, is not whether this should be regarded as an important element, but

how this standard can be definitized so as to have a somewhat satisfactory common meaning to all who attempt seriously to employ it. Numerous educational sins may have been committed in the name of this apparently high sounding phrase widely known as "psychological adaptation of subject matter." It is doubtful, however, whether any element involved in the organization of the content is more consequential than this is, so far as the pupil's meaningful learning and understanding are concerned. With pertinence, therefore, the following interrogation may be included, namely, *How successfully is any attempt made, psychologically considered, to adapt the subject matter to pupils' capacities and interests?* This is to say, *How well is the content adapted to the aptitudes and abilities of pupils who differ in various respects, and, is the content such as to appeal to wholesome attitudes and abiding interests of pupils?*

A precaution should here be suggested, lest some critic will hurriedly insist that the points of view of the so-called expert subject matter specialist or scholar cannot be wholly ignored in the consideration of the selection and organization of materials of instruction. Admittedly, it would be unfortunate, and erroneous to eliminate such individuals completely. Nevertheless, the recognition of the significance of highly, sometimes called logically organized subject matter, is a question of degree. Very likely too much has been made of the so-called opposition between the psychological and logical organization and presentation of subject matter, rather than of the insistence upon the complementary aspects of the whole educative process which include the reciprocal relation of the psychological and logical aspects at different stages of the learning process. The problem involved is not, primarily then, how to change the verity of facts which now exist relative to science, or to mathematics, or to language, or other subjects, but how to enable pupils through a suitable organization and presentation of subject matter to understand such truths. Again, here it should be kept in mind that the so-called psychological adaptation of content to the learner's

level represents simultaneously both a problem of methodology and of the organization of the content of subject matter as such.

How far any kind of subject matter can be organized or profitably broken up into sub-parts of an unified whole for teaching purposes, is a time-worn problem. The philosopher, the scientist, the churchman, the linguist, the historian, and others have faced this issue relative to the divisions of human knowledge for hundreds of years in the past. The educationist, too, has faced this conundrum previous to the present century. In fact, the history of education is replete with illustrations of efforts to organize knowledge into main parts and into its sub-parts during the sixteenth, seventeenth, eighteenth, and nineteenth centuries, as well as during the twentieth. Plato, Quintilian, Abelard, Comenius, Spencer, and many other educational theorists are examples in point. Some of these efforts were made relative to the elementary school level or area, to be sure, but the underlying principles and problems were the same as those that are now confronted on the secondary school level or area of teaching and learning.

Divisional, sub-divisional, or topical arrangements of various elementary and secondary school subject matter have been advocated for many years in the past. At the present time, the so-called "unit of teaching" organization of content is found to be quite common in a number of the newer textbooks and courses of study and syllabi in use in the schools. Appropriately, then, the following question among others may be raised. *Is the content of the textbook organized into the so-called modern "teaching units", or into some other newer type of organization, and, are these units or other types of organization included especially significant?* The first half of the above query may be answered largely on an objective basis. The second half of the question will naturally involve considerable subjective consideration. The above sub-item should be included, because the present movement to use the "unit teaching" type of organization is especially prevalent

in many of the subjects—such as, for example, literature, social science, general science and biology. One way in which to determine whether this newer type of suggested reorganization is more valuable than the former organization of some of the content will be to test results or products achieved through this newer type of organization. This will be time consuming. Of course, even then, it will always be difficult to test with any finality the absolute superiority of any one type of organization over another. In any event, it will always be difficult to test with finality the absolute worth of any one type of organization of content over another apart from the simultaneous consideration of the method of presentation which has been used by respective instructors, and apart from the respective abilities of the learners.

The total number of pages included in a textbook is but a relatively small aspect to be considered, as will be pointed out later on, though this fact does have some practical significance. In addition to the total space given to the content of any published manuscript, it is important to note the spread of emphasis, or the distribution of emphasis upon the different phases involved in any one subject. *Are some phases given undue emphasis at the expense of other important elements, or are they relatively well-proportioned?* Clearly this item overlaps with that of the point of view held by the author of a textbook. For example, in the case of biological sciences, certain aspects, accordingly, will be either included or excluded, dependent largely upon the point of view held concerning biology as a “unified” science or not, versus the consideration of botany and zoology as separate divisions of biological science. Likewise this might be true in case of a number of other school subjects. In any event, it is pertinent to inquire, *How well the different aspects of the subject that are treated are proportioned or distributed throughout the textbook.*

As has been suggested in earlier parts of this treatise, textbook materials of instruction have varied during their com-

plete history of existence with reference to the reliability of information included. Inexactness of data included was somewhat more excusable at one time than is now true because of the many cumulative evidences that have become available within many of the subject fields. Naturally, one thinks of science in this connection. Some of the statements once made relative to factual data in the field of science now appear ludicrous because of our newer evidences and laboratory findings through the laborious efforts of research workers. Still, a degree of relative uncertainty, though less in science than in most subject matter fields, will always need to be considered. One must not, however, confine his thinking to the field of natural science, for studies in the field of anthropology and archaeology have furnished many sources of new evidences that were not available earlier in the subject of history and the other social sciences. With these recognized modifications in mind, in passing judgments as to the reliability of data presented in textbooks, it is important to ask, *Are the data presented as accurate and reliable as possible?* In the use of this criterion it will often, if not always, be necessary to seek the counsel of persons who are proven scholars in their knowledge of academic subject matter. This will mean, in some instances, that it will be very desirable to have the judgments of individuals who are employed in higher institutions of learning. Of course, here again, the more concrete the data or content being evaluated, the more impersonal and free from prejudice will be the judgments rendered. Moreover, differences of opinion will sometimes exist among authorities themselves within any given field.

The illustrative materials embodied in the content and its organization within textbooks are intimately interwoven with the item of psychological adaptation of subject matter, as well as with the mechanical features of the textbook. It is interesting to note that this element too has a rather long history in connection with published textbooks. The larger problem of what is involved in the educational presentation of concrete materials of instruction is involved. What guar-

antee is there that, when pictures, drawings, and diagrams, and so forth do appear in a textbook that they will be more beneficial to pupils than when these are not included? Moreover, the whole problem of the relationship between the more concrete and the more abstract types of thinking on the part of pupils is involved. Some experimentation in this respect on the elementary school level has been carried on from time to time. Comparatively speaking, little systematic experimentation has been made on the secondary school level with reference to the virtue or limitation of the use of concrete illustrative materials. Due in part to the recognized need of illustrative materials in the learning process of pupils, it is justifiable to inquire, *Are the illustrative materials of various kinds copious, and how helpful educationally considered are those which are included?* The first part of this sub-standard may be answered somewhat satisfactorily again in objective terms. The latter half of the question may, of course, be subject to considerable variation in judgment, because in part it must be somewhat subjective in nature.

In the last place, the final sub-item suggested also under a previous division of the *general analysis* outline, represents perhaps, primarily, a local program. Whether textbooks shall be chosen first and then courses of study evolved, or vice versa, may be open to debate on theoretical grounds. On practical grounds, the question may be raised whether textbooks adopted should not conform to the nature of the courses offered, published or unpublished, as well as to conform to the presumed purposes for offering such courses. Hence the pertinence of the following question, namely, *Does the textbook harmonize with the courses of study already in vogue as well as with the accompanying aims for offering such courses of study?* Obviously this part of the appraisal must always be made with as full a knowledge as possible of local conditions in a community where the adoption is being made.

(3) *Appraisal standards pertaining to instructional aids found within the textbook, as well as supplementary to it.* Instructional aids, as here used, pertain to the various devices

supplementary to illustrative materials previously discussed. Some textbooks include more of these aids than others. Moreover, in some instances, such devices or helps are better arranged than in others. Except in case of tables of contents, lists of charts and tables, and so forth, and except in the case of indices, appendices, and glossaries the exact location or placement of these aids is, perhaps, not necessarily consequential. The placement of outlines, of summaries, of questions, of exercises, and so forth, are found both at the beginnings, and at the endings of chapters, or of other divisions of textbooks. Granted that these are included somewhere in the published manuscript it is difficult to make any great claim for their exact arbitrary placement whether found at the beginnings or at the ends of different divisions or chapters. In the matter of placement, the problem becomes almost conjoint with that of mechanical construction of the textbook. It is rather surprising how little relative emphasis has been placed upon the necessity for the inclusion of these instructional devices within textbooks. In more recent years, supplementary helps outside of textbooks have been used rather widely. Visual aids of a number of types as well as supplementary collateral readings are suggested in the textbooks which are adopted for use. Pertaining to the inclusion of aids, the following question is submitted: *Are the table of contents, lists of tables, indices, and other like aids significant and complete enough, and are the visual aids and collateral readings and workbooks suggested to supplement the textbooks significant?* Both the quality and quantity of these aids should be considered in this standard, though admittedly, some variation of judgment will occur in making these valuations.

(4) *Appraisal standards relative to the format or mechanical features of textbooks.* The mechanical features of secondary school textbooks, or it may be that it is more just to say certain mechanical features, as previously pointed out, are relatively less consequential, educationally considered, than is true of textbooks for use in the elementary school

period. Durability and quality of paper and binding represent, primarily, elements of financial economy. The hygiene of reading as related to the typography of the book is of considerable educational significance. The total size of a book and its relative significance can probably only be determined best in the light of its use either as the sole text or as among other sources used. Correctness of graphic and other reproductions in the case of some of the school subjects is of considerable consequence. One justifiable question which ought to be noted is as follows, *Is the content comprehensive enough for the length of time for which it is intended to be used, and, is the typography such that the book may be read without physical handicap, and, are the graphic representations accurate as well as educationally significant?*

(5) *Appraisal standards with reference to publishing houses and publishers.* For several reasons, standards applied to the publication and publisher are relatively more difficult to use than in case, for example, of the content and its organization. Fewer facts pertaining to this item are available to most persons upon which to base their valuations than is true of some of the other items previously discussed. In the second place, items pertaining to publication and publisher are more significant with reference to selection and adoption of textbooks than in any other respect. The matter of adoption will be discussed in more detail later on in the volume yet to be published. Whether a textbook is to be regarded as most appropriately named may depend upon a number of factors. Some kinds of revisions made, after the first copyright is procured, are more important than others. That textbooks widely used should be printed by reputable publishing companies no one would be inclined to doubt. Three phases, therefore, here proposed are: *Is the book appropriately named judged by the nature of its content, and in the case of new or revised editions, is the nature of the revised aspects clearly indicated, and is the book published by a well known and efficiently organized company?* Although this last item ought not to be overlooked when analyzing textbooks, the

present writer feels that an *appraisal* outline as such should probably not include the item of publishing houses and publishers either in making the qualitative or quantitative estimates of textbooks. If, however, appraisers do feel that this item should be considered, then, an arbitrary number of, say twenty-five or thirty, points may be added when making a quantitative estimate.

6. Different plans for summarizing appraisal results. Different appraisers may use originality in devising ways of summarizing the results of appraisals made of different textbooks. An example of one way of doing this is found in the following summary tabulation. This plan may be used for

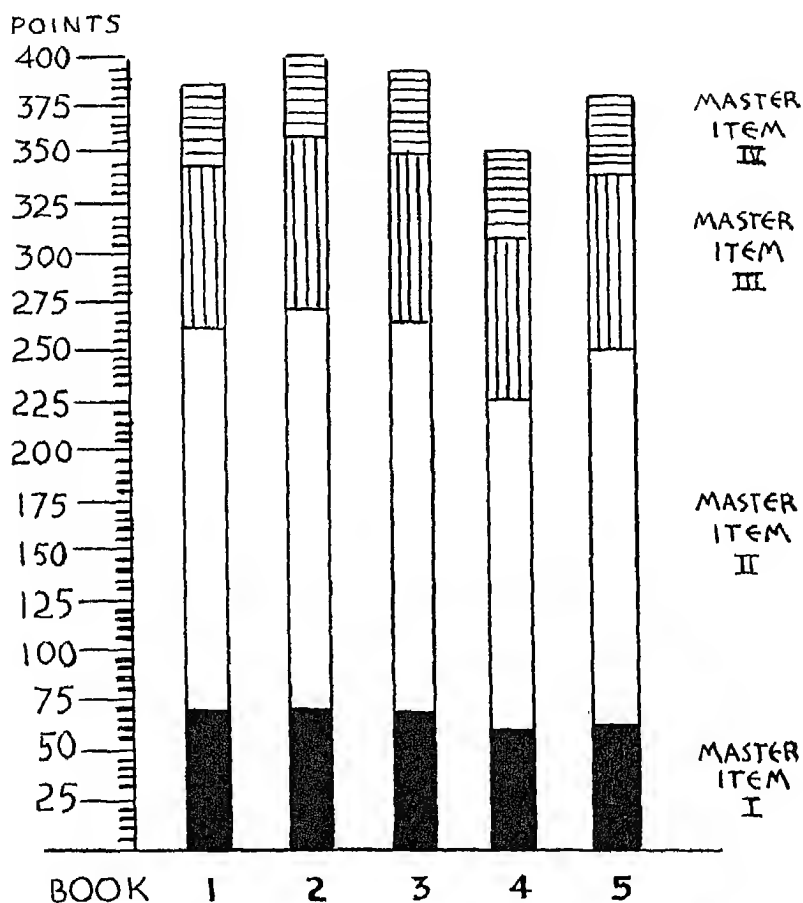
GENERAL QUANTITATIVE APPRAISAL SUMMARY OF FIVE
MATHEMATICS TEXTBOOKS*

Master Items Considered†	Possible Points	Actual Points Given to Each Book				
		Book No. 1	Book No. 2	Book No. 3	Book No. 4	Book No. 5
I. Authorship Personnel and Point of View	75	71	71	68	59	62
II. Nature and Organization of the Content and Methodology	225	192	201	196	167	189
III. Instructional Aids or Helps for Using Text	100	77	81	82	78	82
IV. Mechanical Features including Typography of Text	50	46	47	44	46	44
Total Possible Points	450					
Total Estimated Points		386	400	390	350	377
Percentage Rating		85.77	88.88	86.66	77.77	83.77

* In order to be impersonal in any summary, one may use arbitrary numbers for books and their authors.

† Master item V (publisher) of the analysis outline may be included or not at the option of the appraisers. If these sub-items of the analysis outline including publishers are included when appraising textbooks, an arbitrary number of, say, 25 or 30 points can easily be added to the total of 450 points used by the present writer.

any number of textbooks that have been appraised and scored. It should be understood that not all appraisers will necessarily agree on the total number of points given to any one textbook. Nevertheless, it is likely that the appraisal procedure which is outlined for use in this treatise will show more agreement than in one in which no outline is used at all. In Chapter IV will be found a suggested appraisal outline or score sheet to be used.



A GRAPHIC APPRAISAL SUMMARY OF THE SAME FIVE MATHEMATICS TEXTBOOKS

A Graphic Summary of an Appraisal of a Textbook on Health (A sample)

ITEMS INVOLVED		QUALITATIVE ESTIMATES				
I. Authorship Personnel of Textbook and Point of View		Poor	Fair	Good	Very Good	Excellent
1	a. How well stated is the point of view, the theory, or the philosophy of the author?	<div></div>				
	b. How acceptable is this point of view, theory, or philosophy?	<div></div>				
2	a. How well stated, if at all, are the reasons for writing the textbook?	<div></div>				
	b. How acceptable are these reasons?	<div></div>				
3	a. How well made, if at all, is the statement concerning the preparation and experience of the author?	<div></div>				
	b. How acceptable is the nature of the preparation, and experience of the author, in order to qualify him for writing the textbook?	<div></div>				
4	a. How motivating, free, and easy is the style of language employed by the author?	<div></div>				
	b. How thought-provoking is the type of presentation?	<div></div>				
	c. How satisfactory is the meaningful presentation of the subject matter in terms of the pupil's progress, and mastery or understanding of the subject?	<div></div>				
II. Nature and Organization of the Content, Including Suggestions on Method						
1	a. How well stated, if at all, are the aims to be achieved through the use of the content?					
	b. How acceptable is the nature of these aims?					
2	a. How well stated, if at all, is the influence of the points of view of other individuals or of committees?					

	Poor	Fair	Good	Very Good	Excellent
b. How significant, in your opinion, is this influence with reference to its acceptability?					
3 a. How well adapted to pupils' differing aptitudes or capacities?					
b. How well adapted to the pupils' differing interests due, in part, to the pupils' previous preparation and experience within some school grade, or else due in part to experience outside the school?					
4 a. How well, if at all, is a statement actually made with reference to organized newer "teaching units"?					
b. How acceptable is the nature of the "teaching units" outlined? or					
c. How well, if at all, is a statement actually made with reference to "topical" or other divisional arrangements but not designated as "teaching units"?					
d. How acceptable is the nature of the topical arrangements of subject matter divisions? or					
e. How well, if at all, is a statement actually made concerning divisions other than "teaching units" or "topical" arrangements?					
f. How acceptable is the nature of these "non-teaching unit" or "non-topical" arrangements of subject matter?					
5 a. How well, if at all, is a statement actually made concerning the proportionate amount of emphasis given to the distribution of various aspects of subject matter within the textbooks?					
b. How acceptable is the nature of this actual distribution of content or of the relative amount of emphasis given to different aspects?					

- 6 a. How accurate and reliable are the original data contributed by the author?
- b. How accurately are the quotations or paraphrases made, or the references given or stated?
- c. How important are the quotations or paraphrases made or the references cited by the author?
- 7 a. How well, if at all, is a statement actually made concerning illustrative materials included within the textbook?
- b. How acceptable are the kinds of illustrative materials used within the textbook?
- 8 How well is the content and its organization adapted to the purposes of the local school and the local courses of study planned or else now outlined?
- 9 How appropriate is the size of the textbook in the light of the period of time for which intended as indicated by the author, or in terms of available equipment?

III. Instructional Aids or Helps for Using the Textbook:

1. How well are the table of contents and indices arranged?
2. How satisfactory are the lists of tables, charts, diagrams, etc.?
3. How satisfactory are the collateral readings or any other corresponding materials?
4. How valuable are the supplementary visual aids, etc., other than those above indicated?
5. How satisfactory are the outlines and summaries throughout the textbook?

[illegible]

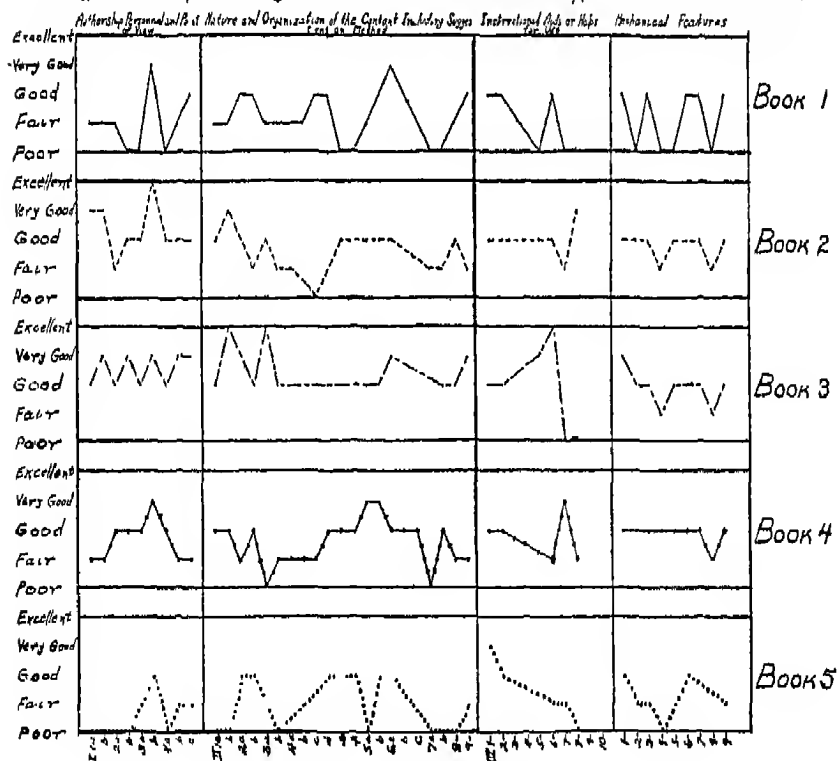
6. How satisfactory are the questions, drills, exercises, problems, projects intended for use in motivating and assisting pupils?
7. How satisfactory are the instructions, if any, to teachers for using the textbook?
8. How satisfactory are the instructions, if any, to pupils for using the textbook?
9. How satisfactory are the supplementary workbooks for teachers, if any, that accompany the textbook?
10. How satisfactory, if any, are the supplementary workbooks for use by pupils?

IV. Mechanical Features, Including Typography of the Textbook and the Format

1. How durable is the binding?
2. How suitable is the color of the cover and how suitable the design?
3. How durable and acceptable is the quality of the paper within?
4. How appropriate is the kind of finish of the paper, for example, absence of glaze or gloss, or of blur, etc.?
5. How appropriate is the "point" size of the type relative to spacing between letters and lines?
6. How appropriate is the spacing and placing of paragraph margins and lines?
7. How accurate is the representation of pictures, photographs, etchings, drawings, charts and graphs of the facts intended to be portrayed?
8. How satisfactory is the arrangement, placement, attractiveness of the different illustrative materials?
9. How attractive, pertinent, and clear is the name of the title of the textbook in terms of the actual content included within?

[illegible]

One Type of Graph Showing the Results of a Qualitative Appraisal of Five Textbooks



CHAPTER IV

An Outline for Analyzing and Appraising Textbooks

1. Description of the analysis and appraisal features of the outline. In Chapters II and III of the manual, a characterization and explanation of the items of the general analysis and appraisal outlines, which are submitted in this chapter, were given. As will be observed, under division A in Chapter IV, instructions for the use of the *general analysis* outline sheet are presented. On the pages following, in the outline sheet, will be found five master divisions pertaining to: The authorship and the point of view, the training and experience of authors; the materials of instruction and methods of teaching suggested; the instructional aids and helps; the mechanical features; and the publishers.

Under divisions A1 and A2 of the *appraisal outline or score sheet* will be found further instructions for the use of the same. Under division A1 four master items and their subdivisions are listed together with provisions for checking the *qualitative* estimates of textbooks which are to be appraised. Provision is made for five qualitative estimates—namely, *poor, fair, good, very good, and excellent*, together with finer distinctions if desired. Division A2, a score sheet, also contains four master items together with the corresponding sub-items. In contrast to the qualitative division A1 of the appraisal outline sheet, division A2, the score sheet, makes provision for quantitative estimates. The total possible number of points suggested by the present writer for any one textbook appraised is 450, which is an arbitrarily set figure. In the event appraisers wish to include the sub-items under publishers, 25 or 30 points can be added, making a total of 475 or 480. If desired, textbooks, whenever appraised, may be arbitrarily numbered instead of using the names of the authors. In columns to the right on the appraisal sheet, provi-

sion has been made for registering quantitative estimates, or scores, for the respective items.

DIVISION A

2. **An Outline for Analyzing All Different Textbooks.** In Chapters II and III of the "Manual for Analyzing and Selecting Textbooks," various items included in the general analysis and appraisal outlines have been discussed. It should be observed, as is indicated throughout Chapters II and III of the Manual, that the outline consists of two parts, namely, *analysis* and *appraisal*. All textbooks should be carefully analyzed first, and then afterwards appraised. This whole picture should be kept in mind before attempting to follow out in consecutive order the ten steps in the instructions outlined below for the *analysis* of textbooks.

✓ Separate copies of this outline, outside of the manual, will be published. It seemed desirable to make very clear at the outset the procedure to be used first in the general analysis outline, and then, in the instance of the general appraisal outline. The main thesis to be kept in mind is that the general analysis outline should be considered always in conjunction with the general appraisal outline, in addition to recognizing the steps to be used in both the analysis and appraisal of textbooks, as indicated in the following pages.

✓ (1) *Instructions for the use of the general analysis outline.* The following instructions are given in order to assist in the more uniform use of the *general analysis outline*. [The more detailed characterization of the items of the outline sheet have been given in Chapter II of the manual in order to clarify their exact meanings for all individuals:]

✓ First, at the top of the general analysis outline, certain preliminary items have been listed for each book, to be analyzed with reference to:

- a. the name of the textbook; b. the name of the author; c. an arbitrarily designated number of the book analyzed; d. date of publication; e. edition; f. and, the name of the publisher. Fill these out in the instance of each book examined.

Second, note carefully the five large master divisions of the general analysis outline sheet, and be sure that the respective meanings of these are clear either by rereading Chapter II of this volume, or by observing the master items carefully as listed in the outline itself, as presented in Chapter IV of the manual.

Third, read through the complete list of sub-items, included under the five large master divisions of the analysis outline sheet, making certain that the meanings of each of these are also as clear as possible.

Fourth, systematically record your observations and findings in the order of the items listed on the analysis outline sheet, checking the items on the left-hand side, as well as writing out statements on separately inserted sheets.

Fifth, record all of your observations and findings in the order of the items listed in the analysis outline sheet.

Sixth, in the instance of each successive textbook analyzed, continue this same procedure. In this way, it will later on be possible to place side by side the findings gotten from the analysis made of any number of textbooks.

Seventh, if desired, these analysis outline sheets upon which your findings have been placed, may be pasted together and folded, each sheet to the right of the initial one representing an analysis of additional textbooks studied.

Eighth, these descriptive data and findings will, then, furnish the basis for the *appraisal* of these same textbooks at a later juncture.

Ninth, be sure to place on additional inserted sheets items of your own which you think are important, if any, beyond the items already mentioned in the outline itself. This practice will tend to reduce, in some measure at least, the tendency simply to mechanize the procedure in textbook analysis.

Tenth, the contents of the textbooks in the different subject fields, will vary from one another. This will, of course, eventually call for the use of somewhat more differentiated, or special analysis outlines, which may appropriately be labeled *division B*, to supplement *division A* herewith submitted. The nature of these differentiated outlines will be presented in more detail in Chapter V. The outline presented in Chapter IV, however, is intended to be general in nature and applicable to all subject fields irrespective of their nature. The chief purpose of this general analysis outline sheet is to assist in unifying the common interests of all persons in all departments of the elementary,

junior and senior high school in the analysis and selection of textbooks. As indicated earlier, this general analysis outline is applicable also in most respects to textbooks used on the junior college level.

(2) *The nature of the master items and sub-items of the general analysis outline:*

Name of author, or, of authors.....
 Name of the textbook.....
 Date of publication.....
 Name of publisher.....
 Arbitrary number of book given¹.....
 Edition : First..... Second.....

I. Items Pertaining to the Authorship Personnel and Point of View, Training and Experience of Authors

1. The point of view, or theory, or the philosophy, as a whole, held by the author, or authors, relative to the subject, or subject field in question.²
 - (1) Is the above element reflected by the author as follows :
 - a. Either explicitly stated, or implied in the preface?
 - b. Or in the introduction?
 - c. Or in any other part of the textbook?
 - d. Or not given anywhere at all?
 - (2) Is the above aspect stated relative to :
 - a. The content of the subject matter?
 - b. The method or technique of teaching?
 - c. The pupils' interests, needs, capacities or abilities?

¹ The purpose of indicating any textbook by an arbitrary number is to enable one to make an impersonal summary of findings, using this designated number instead of the name of the textbook and author if desired.

² Give definite, specific examples of the items found wherever possible, together with the exact page references. Use exact quotations, taken from textbooks, whenever they are especially significant, writing these out on separately inserted sheets of paper. Check the items on the left-hand side of the outline sheet, in addition to writing out quotations on separate sheets.

- d. The grade or year of school work for which intended?
 - e. A combination of any two or more of a, b, c, or d?
 - f. Any phase not enumerated in a, b, c, or d?
2. Definitely specified reasons set forth by the author for writing the textbook.³
- (1) Are the reasons, or aims, or purposes for writing the textbook either explicitly stated or implied in the following?
 - a. The preface?
 - b. The introduction?
 - c. Any other portion of the textbook?
 - d. Elsewhere outside the textbook?
 - e. Not given anywhere at all?
 - (2) Are the reasons, aims, or purposes, if stated, for writing the textbook, given in terms of:
 - a. The content of the subject matter?
 - b. The method or technique of teaching?
 - c. The pupils' interests, needs, capacities, or abilities?
 - d. The grade or year of school work for which intended?
 - e. A combination of any two or more of a, b, c, or d?
 - f. Any phase not included in a, b, c, or d?
3. Nature and recency of training and experience:
- (1) Training.
 - a. Academic degrees held, including courses pursued.
 - b. Professional (courses pursued in education).
 - (2) Teaching or administrative experience in:
 - a. Elementary schools.

³ Give definite examples of respective items, together with exact page references wherever possible to do so, and again use quotations taken from textbooks when these are especially significant, placing these upon inserted sheets. Also check these items on the left-hand side of the outline sheet. Do likewise in remaining parts of the outline. ✓

- b. Secondary schools (junior-senior or four-year high school), etc.
 - c. College or university, or technical and vocational institutions.
 - (3) Experience in writing books, bulletins, magazine articles, etc.
 - (4) Travel or other broadening experiences outside of school precincts.
4. The method employed by the author or authors in writing the textbook based upon:
- (1) General experience in the classroom or that of others, but not systematically tried out in unpublished manuscript form.
 - (2) Tryouts in manuscript form but not under carefully controlled experimental conditions.
 - (3) Tryouts in manuscript form under as well controlled experimental conditions as possible.
 - (4) Well thought out theory but not tried out in the classroom either by the author or by others.
5. General style, and intelligibility of presentation of the content of the textbook.
- (1) Especially motivating and thought-provoking for the types or groups of pupils for whom intended.
 - (2) The avoidance of over-technical language or terminology or vocabulary burden, and, yet the inclusion of a sufficient number of technical words, phrases, concepts, or ideas so as not to block or hinder pupils in

Note: It is not always easy to obtain the data concerning the training and experience of authors within published textbooks. Sometimes, these data may be found within the textbook; sometimes, on "pasted in" additional sheets, sometimes, in such volumes, for example, as "Who's Who"; sometimes, acquired from publishers by writing them; and occasionally, from other scattered sources.

their continuous progress in the further study of the subject in their later high school or college work.

- (3) Meaningfulness of the treatise as a whole other than mere memoriter knowledge, or perfunctory accumulation of factual data, a means of interpreting human experience.

II. The General Nature and Organization of the Materials of Instruction Included Within the Main Body of the Textbook, Together With Accompanying Suggestions on Methodology^{*}

1. Aims, and influences affecting the nature of textbooks:
 - (1) Either the general recognition of, or the actual statement of, any general or major aims of education such as, for example, the N. E. A. or other sources, etc.
 - (2) Either the general recognition of, or the actual statement of, the aims or purposes of the teaching of respective subjects.
 - (3) Evidences of the influence of national or regional committees, or of associations, the Classical Investigation, the Modern Language Association, the National Council of Mathematics, or of English, etc.
 - (4) Evidences of the influence of individual proponents in curriculum theory and organization, such, for example, as Bobbitt, Thorndike, Morrison, and others.
 - (5) Evidences of any other influences not indicated under (3) and (4).
2. Organization and arrangement of subject matter in terms of:
 - (1) The varying abilities of pupils to comprehend or understand.

^{*} Use here again wherever possible definite examples and significant quotations, giving exact page references of the source statements and examples of various kinds, checking on the left-hand side of the outline sheet items appearing.

- (2) The newer so-called "teaching units" together with sub-problems.
 - (3) So-called "situations".
 - (4) Underlying or guiding principles.
 - (5) So-called "topics" and subdivisions.
 - (6) Merely the usual chapter headings, and sections, etc.
3. Relative proportion of emphasis, and accuracy.
- (1) Proportion of emphasis, or relative perspective given to various elements within a subject or subject group. For example, proportionate emphases given to oral and written composition; or in science, to theoretical and applied aspects; or in foreign language, to the structural elements in comparison or contrast with emphasis upon social backgrounds and customs of the people involved; or in any subject to different aspects considered.
 - (2) Accuracy and authenticity of factual data within the body of the textbook:
 - a. Either original data presented by the author,
 - b. Or data borrowed from others, including quotations.
4. Illustrative materials used in the body of the textbook for clarifying the content. (Pictures, diagrams, graphs, drawings, analogies, etc.)
- (1) General nature as to:
 - a. A wide variety
 - b. Some variety
 - c. Limited variety
 - (2) As to amount whether:
 - a. Numerous
 - b. Frequent
 - c. Comparatively few

5. Suitability to local conditions in question :

- (1) Is the textbook adapted to purposes of the school involved, and to the corresponding courses of study already agreed upon within the school system? It is necessary to have some specific school in mind in this item.
- (2) Is the textbook adapted to the size and kind of community involved, considering available equipment, and the respective needs of pupils and teachers as a whole?

III. Instructional Aids and Helps Included, to Assist in the Use of the Textbooks, Also Accompanying Work Books, Etc.

1. Within the textbook.

- (1) Found at the beginning, such as, for example, tables of contents, either qualified or non-qualified, tables, charts, diagrams, etc.
- (2) Within and throughout the body of the textbook, such as for example, questions, outlines, summaries, problems, exercises, or drills, at the beginnings or ends of chapters or other divisions; or interspersed significant pictures, drawings, diagrams, etchings, graphs, etc.
- (3) Found at the end of the textbook, such as, for example, qualified or non-qualified indices; appendices; glossaries, etc.

2. Supplementary to the textbook as such.

- (1) Lists of references to supplement the textbook.
- (2) Work-books and manuals for use by teachers and pupils.
- (3) Suggested visual aids, photographic, stereoscopic, stereopticon in nature, movies, talkies, etc.
- (4) Suggested first-hand observations through excursions and visitations to various regions and institutions.

IV. The Mechanical Features and the Format (abbreviated suggestions)⁵

1. Size of textbook relative to the amount of time to be devoted to it.
 - (1) Total number of pages.
 - (2) Size of printed page in inches, or millimeters, or picas.
 - (3) Linear space included in printed portion—length of line multiplied by number of lines per page, multiplied by number of pages in book.
 - (4) Total number of words included in the book.
2. Nature and durability of binding and cover.
 - (1) Leather
 - (2) Cloth
 - (3) Paper
 - (4) Other composition
 - (5) Color of cover
 - (6) Type of binding
3. Quality and finish of paper.
 - (1) Weight of paper in pounds, or in other terms.
 - (2) Style of finish of paper.
 - a. Gloss
 - b. Plain
 - c. Dull shade
 - d. Other finish
4. General typography.
 - (1) Point-size of type—six, eight, ten, eleven, twelve, etc.

⁵ See Jackson's "Lead Soldiers," 1937, and Paterson and Miles "How to Make Type Readable," 1940.

- (2) Spacing, leading and margins.
 - a. Between lines.
 - b. Margins on respective pages, lines and paragraphs.
- 5. Pertinency and accuracy relative to placement of:
 - (1) Pictures: poor, fair, good, very good, excellent.
 - (2) Drawings: poor, fair, good, very good, excellent.
 - (3) Designs: poor, fair, good, very good, excellent.
 - (4) Other graphic representations.
 - (5) Accompanying descriptions and explanations.

V. Items Pertaining to Publications and Publishers

- 1. Date of publication of the original manuscript, using copyright date.
- 2. Revised edition.
 - (1) Date of copyright date.
 - (2) Actual nature of revision specifying the aspect or aspects.
- 3. Name of textbook.
 - (1) One of a series.
 - (2) Named after the author.
 - (3) Some other designation.
 - a. Not necessarily giving clue to the content.
 - b. Appropriately named so as to give a definite idea or not of the content of subject matter included.
- 4. Ways and means used by publishing company for indicating the virtues and merits of the textbook.
 - (1) Advance published descriptive notices
 - (2) Summaries and analyses of contents of the textbook sent out after publication.

- (3) Personal presentation of virtues and merits of the textbook, through competent bookmen or salesmen, or other representatives of the publishing company out in the field.

DIVISIONS A1 AND A2

General Outline for Use in Appraising and Scoring Textbooks

- ✓ (1) *Instructions for the use of the general appraisal outline sheets.* These appraisal outline sheets are to be employed after the general analysis outline sheet has been used. Division A1 outline sheet represents a qualitative appraisal, and division A2, a quantitative. In some situations, it may be profitable and desirable to make both the qualitative and quantitative appraisals; in other instances, it may be preferable to use either one or the other. Both of these appraisal outline sheets are discussed in Chapter III of this manual.

In order to economize the time of appraisers, and to uniformize, or at least systematize the procedure, certain suggestions are herein given. After having used the general analysis outline sheet, it should be presumed that one has become familiar with a list of the important items pertaining to all school textbooks. Some of the items incorporated within the *general analysis outline sheet* have been modified and abridged in the *general appraisal outline sheets*. The following suggestions are submitted, therefore, as guides to the procedure, in the employment, by any one, of the general appraisal outline sheets.

✓ First, review conscientiously the findings you have recorded with respect to any one or more of the textbooks which you have previously analyzed, and which you now intend to appraise.

Second, note carefully the modifications and eliminations or abridgments that appear in the appraisal outline sheets in comparison with the items included in the foregoing general analysis sheet.

Third, attempt to appraise systematically the same textbook or textbooks which you have previously studied and analyzed.

- Fourth, a qualitative, or a quantitative appraisal may be made, or both if desired, at the option of the appraiser.
- Fifth, in case one is making a qualitative evaluation or estimate, note the respective items listed in the first column which represent the four master divisions.
- Sixth, at the top of the second column of the appraisal outline sheets are found five ranges of estimates or designations from "poor" to "excellent." On the horizontal lines which appear below these designations, place a check mark at that point which corresponds to your own appraisal. Short crossbars have been used to indicate one's judgments which may fall somewhere between those points designated by the five larger estimates, in the instance that one desires to make finer distinctions than the five that are suggested on the outline sheets.
- Seventh, one may, then, if he desires to do so, graph the results by drawing lines solid or otherwise from one point to another, thereby indicating one's judgments concerning the different items included on the appraisal outline sheets.
- Eighth, one may use the "bar" or line graph, or other types, if he desires, in order to indicate the judgments of worth passed upon the respective items.
- Ninth, whenever it is found that a certain item included in the appraisal outline does not appear in a textbook, simply omit drawing any kind of line from one point on the horizontal lines to others.
- Tenth, several alternatives exist relative to the graphing of summary findings, for the purpose of comparing the qualitative estimates made of two or more textbooks.⁵
- Eleventh, in making quantitative estimates, note the respective items listed in the first column of the quantitative appraisal outline sheets, and record in the columns to the right your own numerically indicated judgments.

⁵ Alternative plans of graphing suggested are as follows:

- a. One can simply place on separate sheets in successive close proximity the respective graphs which represent the findings through the study of different textbooks.
- b. In the case of a limited number of textbooks appraised, one can superimpose the graphs one upon another, providing transparent paper is used.
- c. Or one can use a large enough sheet or cardboard on which to place all of the findings so that they can be seen in any ordinary sized classroom.
- d. Or one can use various plans suggested at the close of Chapter III of this manual.

✓ Twelfth, when you have completed making your quantitative appraisals of any one textbook, or more, place your totals at the bottom of the columns in which the books have been arbitrarily numbered. This plan enables one to summarize impersonally any number of textbooks that may have been appraised.

✓ Thirteenth, from these data it will be possible to compile condensed summary tables that will show the comparisons of any number of textbooks appraised or scored.

✓ Fourteenth, as in the analysis made, be sure also in the appraisals to add additional items of your own which you think are significant, which have not already been included in the outline sheet. Record these reactions on inserted pages labeled notes and comments. Be as definite as possible in your additional items on the textbook which you are appraising.

✓ Fifteenth, ultimately, it will be profitable to supplement this general appraisal outline sheet with differentiated or special outlines as was suggested in the instance of the general analysis outline sheet. Our interest at this juncture is, however, only in an appraisal outline that is intended to be applicable to all textbooks irrespective of the subjects or subject fields involved.¹ A further discussion of these differentiated or special phases will appear in Chapter V of this manual.

✓ Sixteenth, a final percentage rating can be given when quantitative estimates are made by dividing the total possible points, 450, into the actual number of points given by the appraiser, the formula being

$$\frac{AP}{PP} = PR$$

In this formula PP represents possible points, AP actual points given by an appraiser, and PR, the percentage rating of respective textbooks.

Some earlier writers emphasized largely the quantitative appraisals of textbooks. In the present instance, it is felt that appraisals should not necessarily be limited to quantitative statements. In the following outline sheets both qualitative and quantitative estimates have been provided for. It is possible, therefore, to use either outline sheet or both, at the option of the appraiser.

DIVISION A1

The Nature of the Master Items and Sub-Items Under the General Qualitative Outline

Name of Author.....Name of Textbook.....
No. of Textbook.....Date of Publication.....Edition.....
Name of Publishing Company.....

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Authorship Personnel of Textbook and Point of View

- 1 a. How well stated is the point of view, the theory, or the underlying philosophy of the author?
 - b. How acceptable is this point of view, theory, or philosophy?
- 2 a. How well stated, if at all, are the reasons for writing the textbook?
 - b. How acceptable are these reasons?
- 3 a. How well made, if at all, is the statement concerning the preparation and experience of the author?
 - b. How acceptable is the nature of the preparation, and experience of the author, in order to qualify him for writing the textbook?
- 4 a. How motivating, free, and easy is the style of language employed by the author?
 - b. How thought-provoking is the type of presentation?
 - c. How satisfactory is the meaningful presentation of the subject matter in terms of the pupil's progress, and mastery or understanding of the subject?

II. Nature and Organization of the Content, Including Suggestions on Methods of Teaching

- 1 a. How well stated, if at all, are the aims to be achieved through the use of the content?

[illegible]

	Poor	Fair	Good	Very Good	Excellent
b. How acceptable is the nature of these aims?					
2 a. How well stated, if at all, is the influence of the points of view of other individuals or of committees?					
b. How significant, in your opinion, is this influence with reference to its acceptability?					
3 a. How well adapted to pupils' differing aptitudes or capacities?					
b. How well adapted to the pupils' differing interests due, in part, to the pupils' previous preparation and experience within some school grade, or else due in part to experience outside the school?					
4 a. How well, if at all, is a statement actually made with reference to organized newer "teaching units"?					
b. How acceptable is the nature of the "teaching units" outlined?					
or					
c. How well, if at all, is a statement actually made with reference to "topical" or other divisional arrangements but not designated as "teaching units"?					
d. How acceptable is the nature of the topical arrangement of subject matter divisions?					
or					
e. How well, if at all, is a statement actually made concerning divisions other than "teaching units" or "topical" arrangements?					
f. How acceptable is the nature of these "non-teaching unit" or "non-topical" arrangements of subject matter?					

	Poor	Fair	Good	Very Good	Excellent
5 a. How well, if at all, is a statement actually made concerning the proportionate amount of emphasis given to the distribution of various aspects of subject matter within the textbook?					
b. How acceptable is the nature of this actual distribution of content or of the relative amount of emphasis given to different aspects?					
6 a. How accurate and reliable are the original data contributed by the author?					
b. How accurately are the quotations or paraphrases made, or the references given or stated?					
c. How important are the quotations or paraphrases made or the references cited by the author?					
7 a. How well, if at all, is a statement actually made concerning illustrative materials included within the textbook?					
b. How acceptable are the kinds of illustrative materials used within the textbook?					
8 How well is the content and its organization adapted to the purposes of the local school and the local courses of study planned or now outlined?					
9 How appropriate is the size of the textbook in the light of the period of time for which intended as indicated by the author, or in terms of available equipment?					
III. Instructional Aids or Helps for Using the Textbook:					
1. How well are the table of contents and indices arranged?					
2. How satisfactory are the lists of tables, charts, diagrams, etc.?					

	Poor	Fair	Good	Very Good	Excellent
3. How satisfactory are the collateral readings or any other corresponding materials?					
4. How valuable are the supplementary visual aids, etc., other than those above indicated?					
5. How satisfactory are the outlines and summaries throughout the textbook?					
6. How satisfactory are the questions, drills, exercises, problems, projects intended for use in motivating and assisting pupils?					
7. How satisfactory are the instructions, if any, to teachers for using the textbook?					
8. How satisfactory are the instructions, if any, to pupils for using the textbook?					
9. How satisfactory are the supplementary workbooks for teachers, if any, that accompany the textbook?					
10. How satisfactory, if any, are the supplementary workbooks for use by pupils?					
<hr/>					
IV. Mechanical Features, Including the Typography of the Textbook and the Format					
1. How durable is the binding?					
2. How suitable is the color of the cover and its design?					
3. How durable and acceptable is the quality of the paper within?					
4. How appropriate is the kind of finish of the paper, for example, absence of glaze or gloss, or of blur, etc.?					
5. How appropriate is the "point" size of the type relative to spacing between lines?					
6. How appropriate is the spacing and placing of page and paragraph margins?					

7. How accurate is the representation of pictures, photographs, etchings, drawings, charts and graphs of the facts intended to be portrayed?
8. How satisfactory is the arrangement, placement, attractiveness of the different illustrative materials?
9. How attractive, pertinent, and clear is the name or the title of the textbook in terms of the actual content included within?

Poor	Fair	Good	Very Good	Excellent

DIVISION A2

The Nature of the Master Items and Sub-Items Under
the General Quantitative Outline

ITEMS INVOLVED

I. Items Relative to the Authorship Personnel of the Textbook, Point of View or Theory, and Philosophy Held by the Author (75 points)

- 1 a. How well stated, if at all, is a point of view or theory or a philosophy, relative to the subject in hand, by the author either within or outside the textbook proper?
- b. How acceptable is this point of view, theory or philosophy?
- 2 a. How well stated, if at all, are the specified aims or reasons for writing the textbook?
- b. How satisfactory are these aims or reasons set forth for writing the textbook?
- 3 a. How well, if at all, is a statement made concerning the training and experience of the author, and how easily accessible either within or outside the textbook?
- b. How satisfactory, in your opinion, is the nature of the training and experience of the author in order to qualify him for writing the textbook?
- 4 a. How motivating and thought-provoking is the general style of the language employed by the author in the light of the pupils for whom intended?
- b. How intelligible to pupils is the treatise as a whole because of the avoidance of over-technical terminology or vocabulary burden?

Possible Points	Actual Points Given by Appraisers of Books ¹		
	No. 1	No. 2	No. 3
5			
20			
5			
10			
5			
10			
10			
10			
75			

¹On this sheet record, in column No. 1, your findings resulting from the examination of your first textbook. Do likewise for all other textbooks examined thereafter in the appropriate successive columns.

ITEMS INVOLVED

II. Nature and Organization of the Textbook
Subject Matter, Together with Accompanying Suggestions on Methodology. (225 points)

- 1 a. How well, if at all, is there a clear recognition of, or an actual statement given of, either the general aims of education as a whole, or of the subject aims of teaching or of both?
- b. How acceptable is the nature of these general and teaching aims?
- c. How suitable is the nature of the content of the textbook for realizing these aims announced by the author?
- 2 a. How clearly, if at all, is any influence of national or regional committees, or of individual proponents as such indicated in the textbook?
- b. Of what relative value, in your opinion, is this indicated influence?
- 3 How well is the subject matter organized so as to meet the individual differences of pupils in terms of their capacities and previous training, and differences in interests and attitudes?
- 4 How well, if at all, is a clear statement made within or outside the textbook concerning the nature of the organization of subject matter, into different kinds of divisions and subdivisions such as, for example, "teaching units" or major and minor "topics," and problems or "situations," or guiding "principles," or other divisions such as chapters and sections?
- 5 How satisfactory is the actual organization or arrangement of the subject matter within the textbook under any one or more of these plans of organization indicated under 4?

Possible Points	Actual Points Given by Appraisers of Books ¹		
	No. 1	No. 2	No. 3
10			
10			
20			
5			
10			
10			
10			
20			

ITEMS INVOLVED

- 6 a. How well, if at all, is any statement made within or outside the textbook concerning the relative or proportionate emphasis placed upon different phases of the subject involved?
- b. How satisfactory is the actual distribution of emphasis on the different aspects of the subject as found in the textbook in question?
- 7 How accurate and reliable are the original data furnished by the author himself, and how accurate are the quotations or paraphrased statements taken from other sources than his own?
- 8 a. How clear a statement, if any at all, can be found within or outside the textbook concerning illustrative materials included within the textbook?
- b. How satisfactory are the kinds, types, or quality of illustrative materials found within the textbook?
- 9 a. How well, if at all, is any statement made within or outside the textbook concerning the need of the adaptation of the textbook to the nature of the purposes of the local school involved, and to the nature of its courses of study now offered in the local institution concerned?
- b. How satisfactory are the size of the textbook, and the supplementary materials, if there be some, in terms of the period of time during which the textbook is to be covered? (This item bears closely, of course, on the matter of selection of textbooks)

Possible Points	Actual Points Given by Appraisers of Books ¹		
	No. 1	No. 2	No. 3
5			
25			
30			
5			
15			
5			
25			
225			

ITEMS INVOLVED

III. Instructional Aids or Helps Inside and Outside of the Textbook. (100 points)

1. How satisfactory are the tables of contents, the indices, the lists of tables, charts, diagrams, etc., included within the textbook?
2. How satisfactory are collateral readings, work-books, visual aids of different sorts, if any, etc., which are intended to supplement the textbook?
3. How satisfactory are the accompanying questions, drills, exercises, problems, projects, outlines, and summaries within the textbook?
4. How satisfactory are the instructions given to teachers or to pupils within the textbook to be studied, or outside the textbook supplementary to it in any way?

IV. Mechanical Features or Format of the Textbook. (50 points)

1. How durable are the binding and paper?
How satisfactory is the paper finish?
How suitable are the color of the book and the cover design in terms of attractiveness and appropriateness?
2. How satisfactory are the size of type, the spacing of lines, and the marginal spacings of paragraphs?
3. How accurate is the representation of pictures, photographs, etchings, drawings, charts and other illustrative materials, and how suitable and attractive is the placement of the same? How indicative of the nature of the textbook is the title?

Possible Points	Actual Points Given by Appraisers of Books ¹		
	No. 1	No. 2	No. 3
25			
10			
40			
25			
100			
20			
15			
15			
50			
450			

Total Possible Points

Total Actual Points Given

Percentage Rating

4. **An example of a summary plan.** Various plans for summarizing the results after examining textbooks may be used. If qualitative appraisals have been made, one plan of showing the results graphically has been herein presented. Either the line graph or the bar graph can be used. Earlier a sample summary of quantitative appraisals was submitted. Usually it is helpful for school groups to have some sort of concrete summary presented.

CHAPTER V

Differentiated Outline for Analyzing Textbooks in Respective Fields

1. **Complementary special analysis outlines.** *Differentiated* or *special* analysis outlines are herein suggested by the author of this treatise as desirable supplements or complements to the *general* analysis outline already presented in Chapter II. It will be remembered that one argument used earlier in defense of the general analysis outline of common items was to unify the interests of the whole teaching staff on issues common to all instructors. At the same time, it was proposed that special or differentiated items peculiar to the respective subjects and subject fields should be recognized and considered. Obviously, certain items of importance, for example, in the case of foreign languages do not occur in science, or mathematics and vice versa. This is likewise true of other subjects and subject fields. On first thought, many persons will regard these suggested complementary and supplementary differentiated items as excess and useless educational baggage. It may appear to some persons to complicate the analysis procedure unduly. The contention is herein made that this more differentiated analysis, in addition to the general analysis, will call attention to many important items that otherwise will very likely be wholly overlooked. Moreover, no procedure is better adapted to acquainting instructors within the various departments with one another's consequential problems than is the use of special or differentiated outlines or check items. It is assumed, of course, that so far as possible only those items will be considered which represent real educational issues or classroom problems of relatively large importance. Much has been said, for example, about the importance of correlating the work of the different departments within the elementary and secondary schools. The intelligent use of differentiated or special outlines appears to afford one kind of approach in the integration of subject mat-

ter which is worthy of serious consideration. This, of course, is a different kind of integration of subject matter than that wherein subject lines are practically erased, recommended by many educators at the present time. Nevertheless, so long as we recognize subject and subject-group demarcations which are now in vogue, some approximation to the above type of integration of subject matter ought to be possible to be effected.

2. Some difficulties encountered in the use of differentiated or special analysis outlines: Several difficulties will, no doubt, at once occur in any attempt to use differentiated analysis outlines. One of these, it may be claimed, will likely be found on the theoretical side, namely, that after having made the general analysis there is nothing left of any consequence to be analyzed. Obviously, this objection is false. The difficulty is rather to be found on the other side, namely, that the items of importance appear to be so numerous that it is almost impossible to incorporate them into so brief a space as that of a general outline. Another practical objection that, undoubtedly, will be raised by some persons is that to add differentiated subject or subject-group outlines to general outlines will make the whole procedure too cumbersome to be of any practical value. A third difficulty that at once must be faced is, Should a differentiated outline be made separately for the subject group of mathematics, or should, for example, one be used for algebra, or even algebra I, and another for geometry, or geometry I? Or again, in the case of history and other social studies, Should a separate outline be used for American history textbooks, and for other types of history taught as well, or, is it possible to use a composite differentiated outline for the whole field of history, and, one for civics, and an other for economics and sociology textbooks?

To the present writer, the last of these three difficulties mentioned above seems to be the greatest. The need for supplementing the general analysis outline with differentiated items peculiar to the respective subject fields is too obvious to require much defense. The objection of cumbersomeness does offer some practical difficulty as to the profitable use and

manipulation of this procedure, but if due precaution be taken so that the added items really have educational value, part of this difficulty will rather easily disappear. With respect to the last difficulty, on the whole, it may be desirable to begin by using differentiated outlines for, let us say, algebra, geometry, American history textbooks, and so forth, rather than to attempt to use outlines for mathematics, or history as a whole. However, the practice used ought to be determined in part by the local set-up in which textbooks are being considered or chosen. One difficulty in suggesting that separate differentiated outlines be used for each sub-divisional aspect of a subject field is that there seems to be no end to the work which this will require on the part of those who make analyses.

3. **Issues and problems reflected through differentiated analyses.** At this point two remarks should be made. In the first place, as earlier indicated, general analysis outlines for use in checking textbooks should, so far as possible, represent real and significant educational issues. In the second place, the object in case of the use of differentiated or special outlines is not so much to attempt to include or exhaust all possible items as it is to create the practice on the part of individuals of looking for certain kinds of items that do make a difference with respect to effective teaching. This is another way of saying that almost an unending array of problems and issues will present themselves even with respect to any one sub-divisional aspect of any subject group, such as English composition, or literature, or algebra, or geometry, or first year foreign language, and so forth.

4. **Some examples of the segregation of the items of differentiated analysis outlines from general outlines.** Differentiated or special analysis outlines have progressed comparatively little even up to the present time. Some examples, however, are available. In some instances, the past practice has been to include a considerable number of general items within the so-called special outlines of the different subjects. The formulation of satisfactory differentiated analysis outlines is a

complicated and unending task. At the present time, therefore, this discussion is intended to be as non-dogmatic in nature as possible. A limited number of examples will be presented accompanied by some suggestions as to possible further procedure. Of course, at least two positions may be taken at the outset. One of these is that the general items of analysis and the differentiated items should be included in the same outline. Another is that they should be segregated, as is proposed by the author of the present treatise, the general outline being numbered division A, and the differentiated outlines, division B with subdivisions B1 and B2.

5. Discussion of division B, the differentiated or special analysis outlines. In modified form, the suggestions made previously concerning the *use* of the general analysis and appraisal outlines will also apply in the use of the differentiated outlines. A suggestion previously made indicated that the point of view of the author, the content of subject matter including methodology, and instructional aids and helps should be considered in the differentiated outlines. Space is not here available for presenting a complete sampling of differentiated analysis and appraisal outlines for each of the different subjects. However, a very brief representative list of concrete examples is submitted in order to suggest what appears to be a profitable procedure, whenever attempting to make differentiated analyses of textbooks. An abbreviated list of items is given, therefore, under three major divisions of the outline, namely, *point of view of the author*, *content of subject matter and methodology*, and *instructional aids and helps*. It will be recalled that it was previously suggested that the items of mechanical construction and the format of a textbook, as well as that of publisher and publication should be taken care of under the general analysis outline for use in the case of any and all textbooks. The same items which are indicated here under a differentiated *analysis* outline, on the whole, will be used again in Chapter VI for use in a *differentiated qualitative appraisal* outline. Sample types of items are given under various subject groups which are intended

to be merely illustrative. Other items than those herein suggested will occur to individuals interested in the different subject groups. Since so much work needs yet to be done by way of evolving satisfactory differentiated outlines, precaution should be taken lest any form, at this stage of development become too stereotyped, and too slavishly employed. Differentiated items of the following kinds may be used with profit to supplement the general analysis outline under the respective subjects.

B1. Differentiated or Special Analysis Outlines

(A) ENGLISH (LITERATURE)

1. *Aim or Point of View of the Author.*
 - a. Does the author give any place to the treatment of anthology? Yes..... No.....
 - b. Is some space given to both the earlier classics, and to the more modern types of literature? Yes..... No.....
2. *Subject matter and Methodology.*
 - a. What proportionate amount of space, if any, is given to a treatment of the history of literature?.....
 - b. Is the subject matter arranged according to "types" or "chronologically" or both? Types..... Chronologically..... Both.....
3. *Instructional Aids and Helps.*
 - a. Do the activities suggested aid the pupil in linking up his study of literature with life experiences? Yes..... No.....
 - b. Are the reading lists arranged so as to provide for meeting the individual needs, and interests and abilities of the pupil? Yes..... No.....

(B) LATIN

1. *Aim or Point of View of the Author.*
 - a. Is the cultural value of Latin emphasized by the author? Yes..... No.....

- b. Is the correlation with such subjects as, for example, English, French, and Spanish emphasized? Yes.....
No.....
- c. Is the primary emphasis on the formal and structural side, or on the functional? Formal.....
Functional.....

2. *Subject Matter and Methodology.*

- a. Is any material written in English concerning Roman life and customs provided that would tend to motivate pupils? Yes..... No.....
- b. Do the vocabularies, stories, and grammatical constructions begin with relatively easy forms and gradually become more difficult? Yes..... No.....
- c. Are there any lists of French, and Spanish words which indicate common root forms? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Are Latin plays, projects, songs and games suggested to interest pupils in the subject? Yes..... No.....
- b. Are accurate and interesting pictures, maps, and drawings included portraying buildings, roads and the scenery of Rome? Yes..... No.....

(C) FRENCH

1. *Aim or Point of View of the Author.*

- a. Is the cultural value of French emphasized by the author? Yes..... No.....
- b. Is the correlation with such other subjects as, for example, English, Latin, and Spanish emphasized? Yes.....
.....! No.....
- c. Is the primary emphasis on the formal and structural side, or on the functional? Formal.....
Functional.....

2. *Subject Matter and Methodology.*

- a. Are the exceptions to grammar rules placed within the body of the textbook, or in the appendix? Body of textbook..... Appendix.....
- b. Does a vocabulary accompany each lesson? Yes..... No.....
- c. Is the matter of pronunciation handled in the conventional manner, or by use of vowel charts, etc.? Conventional..... Vowel charts, etc.....
- d. Is the direct or indirect method of teaching employed, or both? Direct..... Indirect..... Both.....
- e. Is the distributed repetition of important words provided for? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Are maps and diagrams included? Yes..... No.....
- b. Are there illustrative materials found throughout the textbook? Yes..... No.....
- c. Are any supplementary English or French readings on the life and customs of the French people suggested? English..... French..... Both.....

(D) HISTORY (WORLD)

1. *Aim or Point of View of the Author.*

- a. Does the author indicate for what grade level his textbook is intended? (9th, 10th, etc.)? Yes..... No.....
- b. Is a defense made for World History versus other kinds of history in the secondary school? Yes..... No.....
- c. Is the emphasis primarily social, industrial and economic, or political and military? Social..... Industrial and economic..... Political and military..... Or all of these aspects.....
- d. Is the point of view biased? Yes..... No.....

2. *Subject Matter and Methodology.*

- a. What proportionate emphasis is given to the various aspects of history (ancient, medieval, modern, American, etc.)?
- b. Is the subject matter arranged primarily in terms of large teaching unit topics and issues, or in chronological order? Unit topic..... Chronological order.....

3. *Instructional Aids and Helps.*

- a. Are helps suggested for assisting the pupil in making the time sense or element more real? Yes..... No.....
- b. Are any aids given or suggested for assisting pupils in making generalizations, and conclusions based upon the subject matter studied? Yes..... No.....

(E) CIVICS

1. *Aim or Point of View of the Author.*

- a. Does the textbook include an emphasis on both a structural and functional treatment of government? Structural..... Functional.....
- b. Does the author state for what grade level the textbook was intended? Yes..... No.....
- c. Is the point of view biased? Yes..... No.....

2. *Subject Matter and Methodology.*

- a. What relative or proportionate amount of space is given to the different units, topics or phases.....
- b. Is special provision made for understanding the more technical terms employed? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Are visitations recommended to be made, and observations of, local institutions? Yes..... No.....

- b. Are pamphlets and bulletins and other state and national publications suggested, to supplement local publications? Yes..... No.....

(F) BIOLOGY (COMBINED OR COMPOSITE BOTANY AND ZOOLOGY)

1. *Aim and Point of View of the Author.*

- a. Is any defense of the composite course in biology made versus the treatment of botany and zoology separately on the secondary school level? Yes..... No.....
- b. Are the applications made by the author of biological theory to every day life of the pupil numerous?.....
Or few.....
- c. Is the structural and classificatory, or the functional approach emphasized chiefly? Classificatory.....
Functional..... Both.....

2. *Subject Matter and Methodology.*

- a. Are the correlations with chemistry, agriculture, household arts, health and hygiene, etc.? Numerous and appropriate..... Few and insignificant.....
- c. What relative or proportionate emphasis is given to the different units, or topics, or phases?
.....

3. *Instructional Aids and Helps.*

- a. Are any helps suggested on mastery of the difficult concepts in biological theory? Yes..... No.....
- c. Is the laboratory and demonstration work related to both the textbook material, and also to environmental conditions? Textbook..... Environmental conditions and situations.....

(C) CHEMISTRY AND PHYSICS

1. *Aim and Point of View of the Author.*

- a. Is the chief emphasis placed on theoretical, or applied science, or on both? Theoretical..... Applied..... Both.....
- b. What correlations of chemistry and physics are there with other sciences and with mathematics? Numerous and appropriate..... Few and insignificant.....
- c. Is any place given to the historical development of chemistry or physics? Yes..... No.....

2. *Subject Matter and Methodology.*

- a. What proportionate or relative amount of emphasis, for example, is given in¹ the case of "inorganic chemistry" to such phases as dispersion (distribution of water, dispersion in water, colloidal).....; Chemical changes (air as a chemical mixture, etc.); Structure of matter.....; Symbols, equations, weight and volume relations.....; The periodic classification (electronic structure of matter, etc.); Acids, basis, salts, and ionization.....; Carbon.....; The nature of non-metallic elements.....; Special theory.....; Recent developments.....; Organic chemistry.....?
- b. Are the difficult concepts clarified? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Are the experiments provided for, important points covered in the textbook? Yes..... No.....
- b. Are photographs and discussions of eminent scientists discussed significantly and with pertinence? Yes..... No.....

¹ Reports on correlation of high school and college chemistry by Prof. B. S. Hopkins and others, *Journal of Chemical Education*, April to June, 1936.

- c. Do illustrations, diagrams, and sketches significantly accompany the illustrations? Yes..... No.....

(H) ALGEBRA

1. *Aim and Point of View of the Author.*

- a. Is a point of view explicitly stated? Yes..... No.....
- b. Is the emphasis placed on the practical, or theoretical side of algebra, or both? Practical..... Theoretical..... Both.....
- c. Is the aim primarily to assist in the later study of mathematics in college? Yes..... No.....

2. *Subject Matter and Methodology.*

- a. Is a relative or proportionate emphasis in the textbook given to simple equations.....; graphs.....; formulas.....; fundamental processes.....; signed numbers.....; factoring.....; radicals.....; quadratic equations.....; trigonometric functions.....; or other phases.....?
- b. Are suggestions made for presenting or adapting the materials of instruction to the varied interests and needs of college and non-college pupils? College.....; Non-college.....

3. *Instructional Aids and Helps.*

- a. Are any devices suggested for helping pupils to see the practical applications of algebra to everyday life? Yes..... No.....
- b. Are any concrete examples given showing the relation between algebraic equations, formulas, etc. and other subjects such as physics, engineering, etc.? Yes..... No.....
- c. Are the exercises outlined for pupils graduated according to difficulty? Yes..... No.....

(I) GEOMETRY

1. *Aim and Point of View of the Author.*

- a. What purposes, if any, are indicated for the study of geometry? Mental discipline.....; practical value.....; Cultural value.....
- b. Are other specific claims, if any, made by different authors in their textbooks?

2. *Subject Matter and Methodology.*

- a. Is dominant emphasis given to intuitive and demonstrative geometry? Demonstrative.....; Intuitive.....; Both.....
- c. Is a relative or proportionate emphasis in the textbook given to triangles, perpendiculars and parallels.....; polygons.....; circles, angles, and arcs.....; loci.....; and to other significant phases.....?
- c. Are there correlations with geometry and with other mathematical subjects, and with other non-mathematical subjects? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Is special emphasis given to technical terms and word lists used? Yes..... No.....
- b. Is special provision made for pupils having varying interests, needs and abilities? Yes..... No.....
- c. Is use made of historical notes in order to clarify the meaning of the study of geometry for pupils? Yes..... No.....

(J) HOUSEHOLD ARTS FOR GIRLS

1. *Aim and Point of View of the Author.*

- a. Is the emphasis placed strongly on home making as the chief aim of the author? Yes..... No.....

- b. What other claims, if any, are made by the author for pupils in their study of household arts?

2. *Subject Matter and Methodology.*

- a. Is a relative or proportionate emphasis placed upon the large divisions, such as food.....; clothing.....; home management.....; other features.....?
- b. What proportionate amount of space is devoted to subdivisional topics?

- c. What relationships are there to other subjects, such as health and hygiene, social science, sociology, and economics, etc.? Numerous.....; Frequent.....; Few, if any,.....

3. *Instructional Aids and Helps.*

- a. Are there suggested practical exercises for clarifying the theoretical aspects of the textbook's discussions? Yes..... No.....
- c. Is there the modern "unit" arrangement of the laboratory work? Yes..... No.....

(K) INDUSTRIAL ARTS FOR BOYS

1. *Aim or Point of View of the Author.*

- a. Is the aim or claim of the author disciplinary or cultural, or practical in nature? Disciplinary.....; cultural.....; Or practical.....
2. What other aims or claims are made by the author in the study of industrial arts for boys?

2. *Subject Matter and Methodology.*

- a. What relative or proportionate emphasis is given to different units, or topic, or other divisions of subject matter?
- b. Are there correlations with other subjects in the curriculum such as English, history and social studies, household arts, and fine arts, extra-classroom activities, etc.? Yes..... No.....
- c. Is there a significant treatment of the historical development of trades and industry? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Are there suggestions as to the laboratory procedure which is to accompany and clarify the textbook discussion? Yes..... No.....
- b. Are there suggested visitations, and observations of the actual organization and practice of local industries of all kinds? Yes..... No.....
- c. Are there suggested exhibits of accomplishments of pupils during the school year in local schools? Yes
..... No.....

(L) COMMERCIAL WORK (BOOKKEEPING)

1. *Aim and Point of View of the Author.*

- a. What aims are announced by the author? Disciplinary
.....; practical and economic.....; cultural.....; social.....
- b. What other claims, if any, are made for the study of bookkeeping?

2. *Subject Matter and Methodology.*

- a. What proportionate amount of space is given to different divisions and sub-divisions of subject matter?
.....

- b. Are there any data dealing with the historical development of the subject? Yes..... No.....
 - c. Is any dominant method stressed? Yes..... No.....
 - d. Are any correlations suggested with any other school subject or subjects? Yes..... No.....
 - e. Are there suggested exercises for practice? Yes..... No.....
3. *Instructional Aids and Helps.*
- a. Are there lists of devices suggested for motivating the learning of the pupil? Yes..... No.....
 - b. Is there mention of the more recent developments in the field? Yes..... No.....

(M) AGRICULTURE

ANIMAL HUSBANDRY, FARM MANAGEMENT, ETC.

1. *Aim and Point of View of the Author.*
- a. What, if any; of the following aims are announced by the author? Disciplinary.....; practical or economic.....; cultural.....; social.....
 - b. What other aims are given, if any, for the study of agriculture by the pupils?.....
2. *Subject Matter and Methodology.*
- a. What proportionate amount of space in the textbook is given to different divisions and sub-divisions of the subject matter?
 - b. Are any data given dealing with the historical development of agriculture? Yes..... No.....
 - c. What indications are there of the nature of projects suggested for pupils?
 - d. Are any correlations with other subjects suggested—science, economics, sociology, etc.? Yes..... No

3. *Instructional Aids and Helps.*

- a. Are visitations and observations of agricultural practices in different communities suggested? Yes.....
No.....
- b. Are there exhibits during the school year of the accomplishments of pupils? Yes..... No.....
- c. Are there suggested, supplementary readings from national and local publications, magazines, bulletins, and research studies made in higher institutions of learning? Yes..... No.....

(N) MUSIC (VOCAL)

1. *Aim and Point of View of the Author.*

- a. What are aims announced by the author? Cultural; social.....; leisure time.....; practical.....
- b. Are any other aims claimed for the study of vocal music not included above?

2. *Subject Matter and Methodology.*

- a. What proportionate amount of space is devoted to different phases or aspects of the subject matter?.....
.....
- b. Is any dominant method of instruction announced? Yes..... No.....
- c. What relative amount of emphasis is placed upon music instruction in order to produce skilled musicians.....
.....; and appreciative participants and listeners in the field of vocal music?
- d. What use is there for historical data pertaining to eminent musicians and their productions for motivating pupils' interests? Yes..... No.....
- e. What correlations with other subjects are suggested?

3. *Instructional Aids and Helps.*

- a. Is the use of the radio and local recitals suggested?
Yes..... No.....
- b. What suggested lists of readings in music publications?
Yes..... No.....
- c. Is there any indication of recent trends in vocal music?
Yes..... No.....

(O) HEALTH AND PHYSICAL EDUCATION

1. *Aim and Point of View of the Author.*

- a. Are there any aims of health and physical education outlined? Yes..... No.....
- b. Is the relative importance of health and physical education in the secondary schools discussed? Yes..... No.....

2. *Subject Matter and Methodology.*

- a. Is a distributed, proportionate emphasis given to both the instructional aspect as well as to the program of varied activities? Yes..... No.....
- b. Is a distributed, proportionate emphasis given to the different topics considered under the instructional phases as well as under the program of activities for pupil participation? Yes..... No.....
- c. Is some space devoted to the historical development of health and physical education? Yes..... No.....
- d. Is the work graduated in difficulty for the different grade levels? Yes..... No.....

3. *Instructional Aids and Helps.*

- a. Is there a wide range of activities for motivating the pupils' work? Yes..... No.....
- b. Are readings based on national, state, and local publications suggested? Yes..... No.....

- c. Are visitations and observations of local conditions pertaining to health and physical education suggested?
 Yes..... No.....

6. **Resumé of suggestions concerning supplementary, differentiated analysis outlines.** The foregoing items represent only partial lists of what should be regarded as worthy of consideration, whenever attempting to analyze textbooks published in the various subject fields. Some overlappings occur, to be sure, in the items outlined under the respective divisions of subject matter and methodology, and, under the supplementary aids and helps. No iron-clad demarcation need be made between the three main divisions of these differentiated outlines. The chief concern is not to overlook any consequential items in the consideration of any one subject or other. Many other items representing problems and issues will occur to persons who are tutored in these respective fields. These should be added to the abbreviated lists that have been herèin presented. Especially will additional items be necessary in the instance of the item labeled subject matter division.

Some illustrative differentiated items have been listed above under the *subjects* of literature (English), Latin, French, World History, Civics, Biology, Chemistry, Physics, Algebra, Geometry, Bookkeeping, and Vocal Music; and under the *subject groups* of Household Arts for Girls, Industrial Arts for Boys, and Agriculture. A considerable number of items that are worthy of consideration have not been listed due to lack of space. But enough samplings have been given to indicate what is meant by special or differentiated outlines. Through the further cooperation of individuals who are interested in the different subject fields, it will be possible to evolve more satisfactory differentiated outlines than have heretofore existed.

The recommendation is hereby strongly made that to a general analysis outline for common use for any and all of the elementary and secondary school subjects there be added segregated items in differentiated outlines. The general analysis outline should be numbered Division A, and the re-

spective differentiated outlines attached should be considered as Division B, including Divisions B1 and B2. Each one of the differentiated or special outlines should then be attached to the general outline whenever the examination of any textbook is completed.

In abbreviated form, a sampling of differentiated *appraisal* outlines will be given in Chapter VI of this manual. The differentiated appraisal outlines are based directly on the different *analysis* outlines presented in Chapter V. The present writer makes the same contention here which was made earlier under the discussion of the general analysis and general appraisal outlines, namely, that *the logical sequel of differentiated analyses outlines, is differentiated appraisal outlines*. Because of lack of space, only examples of differentiated *qualitative appraisal outlines* are submitted. The differentiated quantitative appraisal outlines were formulated, should correspond to the patterns previously suggested under the general appraisal outline. The weightings could be suggested for the various items and the computations could be made for the respective items as well as for the total number.

CHAPTER VI

Differentiated Outlines for Appraising Textbooks in Respective Fields

1. **General and special items combined in the outlines published earlier.** After having applied the special *analysis* outlines to respective textbooks, it is possible, with economy of time and effort, to apply special *appraisal* outlines. The purpose of the special analysis outline is similar to the purpose of the general analysis outline discussed in Chapter II, that is, to guarantee a ready acquaintance with what a textbook actually does contain. As previously said, whether the special analysis and special appraisal outlines can be used with profit, simultaneously or not, will depend upon the ability and experience of the individuals who participate. In case of some of the items involved, a ready thorough-going acquaintance with the content of the textbook serves as a marked advantage, whenever attempting to make differentiated appraisals. *Upon examination of the earlier published literature, one will find very little clear discussion relative to differentiated or special analysis outlines. Whatever has been published has to do with differentiated or special appraisal items, rather than with special analysis, and this too has been more frequently than not combined with the general appraisal items.*

2. **Either qualitative or quantitative special appraisal outlines defensible or both.** It is not easy with absolute certainty to say whether the qualitative or the quantitative differentiated outline will be most profitable for use by the participants. The answer to this problem depends upon a variety of factors. The conviction of the present writer is that either, or both can be justified, depending upon existing conditions. Some persons prefer to have estimates stated in quantitative terms because it appears to them that in this manner comparisons may be made more easily between different textbooks.

Other persons are satisfied with graphic representations which indicate relative degrees of qualitative differences, pictographs being used as the basis of comparisons of the worth of textbooks. No matter what type of estimate be used, qualitative or quantitative, it will be necessary to make use of some subjective reactions. This is said because sometimes it is felt that a quantitative estimate or measurement is wholly objective in nature. Some of the earlier used so-called "score cards", or "rating sheets", or "check lists" were misinterpreted in this respect. It is herein recommended that in case the appraiser has used the general qualitative outline, under division A, then, in case of division B, in the differentiated outline, likewise the qualitative procedure should be used. On the other hand, if the appraiser has used the general quantitative outline under division A, then he should also use the quantitative differentiated outline to correspond with the same under division B.

On the whole, the items included under the *differentiated appraisal outlines* should be additional items to those found in the *general appraisal outline* earlier discussed. However, occasionally it will be found to be justifiable to amplify or elaborate or clarify an item in the differentiated outline which has already been included under the general appraisal outline.

3. Recommended procedure in the use of the differentiated, or special appraisal outlines. Earlier in this treatise, instructions for the use of the general appraisal outline were given. Most of the suggestions made there apply also to the differentiated outlines. The fifteenth suggestion refers to the point of view of authors; to subject matter and methodology; to supplementary aids and helps that should be considered in differentiated appraisal outlines. The recommended procedure is, therefore, as follows: Use the general analysis outline in the case of any chosen textbook. Then use either the qualitative or quantitative general appraisal outline, or both, in case of the same textbook. Then use the differentiated or special analysis outline in the case of this same textbook and, finally, the differentiated qualitative or else the quantitative

appraisal outline, or both. The special analysis and appraisal sheets under Division B can then be appended, or attached to Division A of the general analysis and appraisal outlines in order to show the results or findings whenever examining any textbook.

4. **An example of an adapted differentiated appraisal outline for textbooks in English composition.** The following adapted differentiated appraisal outline for use in the study of textbooks in English composition is presented to indicate a general procedure that may be used. Not all of the desirable items are necessarily included. A great deal of effort and time will need to be expended in order to refine differentiated appraisal outlines for English as well as in the instance of other elementary and secondary school subjects. The National Council of English has already done a considerable amount of valuable work in this field to which the reader is referred.¹ Theoretically considered, it would be desirable if subject matter in elementary and secondary schools were all organized under fundamental concepts, including large areas of knowledge and activities, including corresponding sub-divisions. In this way, knowledge and activities would not be vivisected so disparately as now so often occurs. Some day it should be more possible than now to get along without so many different subject labelings, by more closely correlating and unifying those aspects in the different subject fields which are of real value to all students. So long, however, as we continue to teach by subject divisions, as such, rather than in terms of real life issues, and, rather than according to large areas of interrelated experiences of pupils, the practical thing to do is to attempt to appraise subject matter taught, in terms of differentiated subject outlines. These, then can be applied to each of the elementary and secondary school subjects and subject groups. In a later forthcoming volume the concept of undifferentiated subjects will be referred to again.

¹ National Council of the Teachers of English. *English Journal*, Vol. 21, April, 1932, pp. 280-293; Douglass and Boardman, *Supervision in Secondary Schools*, p. 347.

5. **Some criteria that should be recognized when formulating differentiated appraisal outlines.** Certain criteria should be kept in mind in formulating and in applying special appraisal outlines. The *first* of these criteria is, What is the most worthwhile subject matter in terms of the needs of pupils? A *second* is, What subject matter do authors of textbooks feel will be of value to pupils in the future as well as at present? A *third* is, Has the nature of the subject matter been so distributed that it is representative of the whole subject, rather than of too limited a fraction of the whole field? This is to say, Is it representative of all of the significant, and important aspects of the whole field, rather than an exaggerated emphasis upon one or more phases? Practically considered, one step in formulating usable differentiated appraisal outlines is to examine a number of such outlines that have already been published. A second step is to examine a number of textbooks available in the different subject fields, making a list of those items or elements which are significant. A third step which is essential, in the light of a fundamental philosophy of education, is to add to the above list of items, including those which are desirable, but perchance not found either in previously published outlines, or in most textbooks.

An Adapted Differentiated Qualitative Appraisal Outline for Use in English Composition Textbooks (9th and 10th Years or Grades)

ITEMS INVOLVED

QUALITATIVE ESTIMATES

		Poor	Fair	Good	Very Good	Excellent
I. Authorship of Textbook						
1.	How well is the viewpoint of composition as a social activity recognized?					
2.	How well are the uses of composition in everyday life stressed?					
II. Nature and Organization of the Content, Including Suggestions of Method						
A. The ability to gather material:						
1.	How well is the content presented in a way that creates in the pupil a desire to express himself?					
2.	How well does the content as presented help pupils to recognize the value of their own experiences?					
3.	How well are composition activities identified with experience either actual or literary?					
B. The ability to think clearly and forcefully:						
4.	How adequately is composition presented in a way that emphasizes the importance of effective thinking?					
5.	To what degree is composition presented in a way that arouses the initiative and originality of the student?					
C. The ability to recognize and construct a sentence.						
6.	To what degree is sentence sense and sentence structure stressed?					
7.	How well is the content in grammar chosen on the basis of function, and in accord with reliable investigations?					
a.	Stress on points of difficulty, such as verb, pronoun.					

	Poor	Fair	Good	Very Good	Excellent
b. Emphasis on thought relationships and function, rather than structural classification.					
c. Recognition of points of debatable usage.					
8. How closely is the material on usage related to actual language situations, the pupils' frequent errors, etc.?					
9. How well are the requirements in punctuation limited to matters of present day usage?					
10. How adequately are means of self-criticism in writing provided for?					
a. Aids for evaluating own writing.					
b. Basis of comparison with work of others.					
c. Means of comparison with earlier achievements.					
11. To what degree does the drill material stress specific, important points in the mechanics of composition?					
12. To what extent is spelling recognized as a high school problem?					
13. To what degree is the program in grammar and punctuation cumulative, with provision for review?					
14. How adequately is the motivation peculiarly necessary to composition maintained throughout the work?					
<hr/>					
III. Instructional Aids or Helps in Using the Textbook					
1. How adequately is provision made for individual diagnosis and remedial work in grammar and punctuation?					
2. How satisfactory in kind and amount is the practice material provided?					

3. How satisfactory are the means offered for checking achievement?
4. How satisfactory is the workbook provided, if any, in grammar drill, usage, and punctuation?
5. How satisfactory are the devices offered for enriching the pupils' vocabulary?
6. How satisfactory are aids for teaching dictionary use?
7. How satisfactory are devices for developing coherence, etc.?
8. To what extent is illustrative material drawn from pupils' work?

Poor	Fair	Good	Very Good	Excellent

6. **Merits and limitations of the above adapted appraisal outline in English composition.** It is recommended that a first-hand examination be made of the original check list for English composition herein presented in order to pass judgment on its worth. It will be noted that some of the items originally included belong under what has been designated by the present writer as general in nature, and applicable to other subject fields as well. On the other hand, it is appropriate to call attention to certain features of this check list. In the first place, the items considered do emphasize primarily, the functional rather than the classificatory, and structural phases. In the second place, the social significance as well as the individual values of composition are stressed. In the third place, items suggested, or questions raised are supplemented by appropriate readings. In the fourth place, most, if not all of the items considered, are equally applicable to courses of study, syllabi, textbooks, or any other materials of instruction used in the teaching of composition. In the fifth place, the items suggested tend to suggest desirable phases to be looked for, whenever examining and selecting textbooks in composition. At the end of this chapter, a limited number of illustrative references on published special outlines are given in the fields of English, history, and modern language. Adaptations of

these are possible when formulating differentiated outlines. The remaining part of this chapter will be devoted, however, to suggested procedures in formulating and applying differentiated appraisal outlines to different subject fields, based upon the tentative differentiated analysis outlines proposed by the present writer in Chapter V.

Examples of Differentiated Qualitative Appraisal Outlines, B2

(A) ENGLISH LITERATURE

ITEMS INVOLVED	QUALITATIVE ESTIMATES				
I. Aim or Point of View of the Author	Poor	Fair	Good	Very Good	Excellent
1. How well is the treatment of anthology done?					
2. How satisfactory is the relative emphasis given to the earlier classics and the more modern types of literature?					
<hr/>					
II. Subject Matter and Methodology					
1. How satisfactory is the amount and treatment of the history of literature?					
2. How satisfactory is the arrangement of subject matter according to types, or chronologically?					
3. How well is the relation between given ages pointed out, such as Middle Age English and Old English, or Puritan to Cavalier?					
<hr/>					
III. Supplementary Instructional Aids and Helps					
1. How well do the suggested activities link up the pupils' study of literature with life experience?					
2. How well are the reading lists arranged so as to meet the individual abilities, needs and interests of pupils?					
3. How good are the visual aids that are suggested?					

(D) HISTORY—WORLD

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author

1. How well does the author indicate the grade level for which intended?
2. How satisfactory is the defense made for the teaching of world history in preference to the division of Ancient, Medieval and Modern?
3. How well is the industrial, economic, and social point of view set forth in contrast to the military, political point of view?
4. How far is the point of view of the author free from biases or prejudices?
5. How well does the author recognize the influences of geography on historical trends?

II. Subject Matter and Methodology

1. How well is the emphasis on Ancient, Medieval, Modern, and American history distributed?
2. How well are the divisional and sub-divisional topics treated?
3. How numerous and important are the dates of events and movements?
4. How well are cause and effect treated?

III. Supplementary Instructional Aids and Helps

1. How well is provision made for the pupils' comprehension of the time element in history?
2. How well is provision made for assisting pupils in making generalizations?
3. How significant are the maps included?

[illegible]

(E) CIVICS

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author

1. How well is the structural or functional point of view clearly presented?
2. How clearly does the author indicate for what grade level intended?
3. How far is the discussion free from biases and prejudices?

Poor	Fair	Good	Very Good	Excellent

II. Subject Matter and Methodology

1. How well is the proportionate emphasis on different units, or topics distributed?
2. How well is provision made for understanding technical terms employed?

III. Supplementary Instructional Aids and Helps

1. Are visitations and observations clearly outlined?
2. Are pamphlets and bulletins for use by pupils and instructors well outlined?

(F) BIOLOGY

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author

1. How well, if any, is the defense made for a composite course in biology?
2. How well are the applications of theory or of principles made to everyday life of pupils?
3. How satisfactory is the functional in contrast to the classicatory point of view clearly illustrated by the use of the materials taught?

Poor	Fair	Good	Very Good	Excellent

II. Subject Matter and Methodology

1. How well are correlations with such other subjects as chemistry, agriculture, household arts, and health and hygiene indicated?
2. How well is proportionate emphasis on different units or topics of subject matter distributed, i.e., between plants and animals?
3. How well is the economic importance of plants and animals shown?
4. How well is the relation of plants and animals to their environment shown?

III. Supplementary Instructional Aids and Helps

1. How well are suggestions made relative to difficult concepts employed in theory?
2. How effectively are the laboratory and demonstration work related to the textbook material and to environing conditions?
3. How effectively are the results of field trips related to the textbook materials of instruction?

(H) ALGEBRA

ITEMS INVOLVED

QUALITATIVE ESTIMATES

	Poor	Fair	Good	Very Good	Excellent
I. Aim or Point of View of the Author					
1. How consequential is the point of view of the author?					
2. How clearly are the emphases on the theoretical and practical aspects set forth?					
3. How well is the material arranged for preparing for the later study of mathematics?					
II. Subject Matter and Methodology					
1. How well is the proportionate emphasis placed on different divisions of subject matter?					
2. How satisfactorily are the materials arranged for meeting the different abilities, needs and interests of pupils?					
III. Supplementary Instructional Aids and Helps					
1. How satisfactory are the practical applications made to everyday life?					
2. How successfully are the relations of the equation, formulas, etc., related to applications in other subjects?					
3. How well are the exercises graduated according to difficulty?					

(I) GEOMETRY

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author

1. How effective are the following purposes for the study of geometry outlined? Discipline, practical value, cultural value?
2. How well are any other purposes stated, if any?

[illegible]

II. Subject Matter and Methodology

1. How well is the relative emphasis stated concerning demonstrative, intuitive geometry?
2. How well is the emphasis on different phases or topics distributed?
3. How well shown is the correlation of geometry with other mathematical subjects and with non-mathematical subjects?

III. Supplementary Instructional Aids and Helps

1. How clearly are technical terms and words treated?
2. How well are provisions made for pupils having different abilities, interests, and needs?
3. How significant is any historical data used?
4. How well is provision made for developing an appreciation of numerical values?

(J) HOUSEHOLD ARTS FOR GIRLS

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author	Poor	Fair	Good	Very Good	Excellent
1. How clearly is the homemaking idea pointed out as the dominant emphasis?					
2. How well are any other claims or aims pointed out?					
II. Subject Matter and Methodology					
1. How well is the proportionate emphasis placed on different divisions of subject matter?					
2. How well is special provision made for pupils having different abilities, interests and needs?					
3. How well is the relationship to other subjects such as science, health and hygiene, and social studies shown?					
III. Supplementary Instructional Aids and Helps					
1. How effective are the practical exercises and projects for clarifying the textbook discussions?					
2. How well is the "unit" organization of laboratory work outlined and defended?					

(K) INDUSTRIAL ARTS FOR BOYS

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author	Poor	Fair	Good	Very Good	Excellent
1. How well are the following aims, if any, set forth? Disciplinary? Cultural? Practical?					
2. How well, if any, are other aims set forth?					
II. Subject Matter and Methodology					
1. How well are the different units or topics distributed, as for example, drawing, designs, tools, etc.?					
2. How well are correlations with other subjects made?					
III. Supplementary Instructional Aids and Helps					
1. How valuable are the laboratory exercises and projects suggested for pupils?					
2. How profitable are the suggestions made pertaining to the visitation and observation of the actual organization and practices in local industries of all kinds?					
3. How valuable are the types of exhibits proposed during the school year showing the accomplishments of pupils?					
4. How well is experience for pupils provided in manipulative phases of wood-working?					
5. How well is provision made for the readings of woodwork drawings?					

(L) COMMERCIAL WORK (Bookkeeping)

ITEMS INVOLVED

QUALITATIVE ESTIMATES

I. Aim or Point of View of the Author	Poor	Fair	Good	Very Good	Excellent
1. How well are the disciplinary, or practical and economic, or cultural, or social aims defended?					
2. How well are any other aims, if any, defended, personal, vocational, etc.					
II. Subject Matter and Methodology					
1. How well is the emphasis distributed on the different units or topics discussed?					
2. How important are the historical data introduced?					
3. How well defended is any method of instruction proposed?					
4. How valuable are the correlations suggested with other subjects?					
5. How valuable are the suggested exercises for practice by pupils?					
III. Supplementary Instructional Aids and Helps					
1. How valuable are the exercises suggested for motivating the pupils' learning?					
2. How important are the more recent developments mentioned?					
3. How well is either the journal method or the balance sheet presented?					
4. How satisfactorily are the practice exercises arranged for pupils?					

(M) AGRICULTURE
(Animal Husbandry, Farm Management, Etc.)

ITEMS INVOLVED		QUALITATIVE ESTIMATES				
		Poor	Fair	Good	Very Good	Excellent
I. Aim or Point of View of the Author						
1.	How well are the disciplinary, practical or economic, cultural, or social aims set forth?					
2.	How well are any other aims set forth defended?					
II. Subject Matter and Methodology						
1.	How well is the proportionate amount of space devoted to different topics distributed?					
2.	How significant are the historical data which were considered?					
3.	How valuable are the projects suggested for use by the pupils?					
4.	How significant are the correlations suggested with other subjects?					
III. Supplementary Instructional Aids and Helps						
1.	How valuable are the suggested visitations and observations of practices in local communities?					
2.	How important are the school exhibits during the school year or at other times showing the accomplishments of pupils?					
3.	How valuable are the supplementary readings based on local, state, and national publication?					

7. **Resumé of recommendations on differentiated appraisal outlines.** Certain suggested items have been proposed for consideration in the appraisal of different subjects. On the whole, single subjects, such as algebra, English composition, for example, have been used. In a few instances, subject groups have been outlined, as for example, household arts for girls, industrial arts for boys, agriculture, and health and physical education. Many other items should be added under each of the subjects and subject groups by persons who are capable of appraising textbooks. A brief list of selected readings is herewith appended, which should be supplemented by appraisers. It is recommended that wherever published materials are available to appraisers, first, consult these, eliminating whatever items pertain to the general appraisal of any or all textbooks. It is furthermore recommended that appraisers then add to those items proposed by the present writer in this chapter, attempting in all instances to incorporate all items which represent vital issues as to the aim or point of view of the author, the subject matter and methodology, and the supplementary aids and helps to profitable classroom instruction.

8. **Some sample reference readings.** Only sample readings, not an inclusive list, are herein presented.

Coverly, Ernest R. *Fundamental Principles Underlying the Preparation of a Score Card for Textbooks in English.* *English Journal*, Vol. 15, pp. 267-275, April, 1926.

Compton, Miriam. *Check List for Texts in History.*

Diehl, J. D. *Choosing a Grammar for Beginners—Modern Language Journal*, Vol. 2, pp. 368-378, May, 1918.

Dawson, Mildred A. "Language Textbooks" *The Elementary English Review*, 6: 43-46; 69-73, Feb. and March, 1929.

Douglass and Boardman. *Supervision in Secondary Schools*, pp. 346-354.

Forbes, H. Norris. *Selecting a History Textbook for Junior High School*, *Executive Magazine*, 52, 69, Oct., 1932.

Green, A. The Measurement of Modern Language Books, *Modern Language Journal*, Vol. 10, pp. 259-269, Feb., 1926.

Hall-Quest. The Textbook, pp. 82-121, 1918.

Lyman, R. L. "A Study of Twenty-four Recent Seventh and Eighth Grade Language Texts" *Elementary School Journal* 24, 440-452, Feb. 1924.

Marye, Mary E. A Form for Rating Textbooks in English Composition Prepared for the Ninth and Tenth Grades, *School Review*, Vol. 38, pp. 124-137, Feb., 1930.

Smith, Dora V. and Others. Report of the Committee of the National Council of English on the Evaluation of Textbooks in Composition. *The English Journal*, Vol. 21, pp. 280-293, April, 1932.

White, E. Margaret. "The Selection of High School Texts in Modern Language—The *Modern Language Journal* 19, 481-489, April, 1935.